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10 CENTS

CLIMB TO THE CLOUDS IN NEW HAMPSHIRE.

BRETTON WOODS, N. H., July 12.—In a chill driving mist that would compel cautious running even on a wide level road, Harry Harkness rushed Mount Washington in the Climb to the Clouds today and placed the record figures for this

pounds of mechanism up an 8-mile narrow mountain road, and to pull up just 4,600 feet above the starting point after averaging 20 miles an hour without a stop is a sure enough test of man and machine.

There were other splendid performances

magnificent performance. This he bettered next day with the same car stripped, lowering the American gasoline car record to 29:6 4-5.

Steam upheld its reputation for mastering grades when on the second day F. E. Stan-



A. E. MORRISON OF BOSTON MAKING HIS REMARKABLE DASH UP THE MOUNTAIN IN A 24-HP. PEERLESS STOCK TOURING CAR.

year at 24:37 3-5. Something more than the achievements of the drivers of American stock cars was to be expected from the 60-horsepower \$18,000 Mercedes, and from this comparative view the performance was not extraordinary. As a feat of driving, however, it was remarkable. To guide 2,200

that gained the cheers of the little group which gathered about the finish line in the clouds and gave the American built car a place high up in the reliability column. A. E. Morrison of Boston sent the 24-horsepower Peerless stock touring car across the lofty mark in the elapsed time of 36:44 1-5, a

ley dashed up to the line in 28:19 2-5, showing what seven horsepower can accomplish when it is put where it will do the most good.

Less spectacular and yet quite as great a mechanical triumph in its way was the performance of the Metz motorcycle driven by



JAMES L. BREESE IN HIS 40 HORSEPOWER MERCEDES ROUNDING THE TURN AT THE FINISH LINE ON TOP.

Arthur Batchelder of Lowell, Mass. When this slim, clean cut, gritty youth crossed the line in 34:11 3-5 he gave the poor man's car a more serious place in American road locomotion.

The week's program of contests and tours in the White Mountains opened on Monday with the first day of record-breaking hill climbing on Mount Washington. Delegations from New York and Boston arrived on Sunday and headquarters were established in the Mount Washington Hotel, in the pleasant valley at Bretton Woods. The Mount Pleasant House, about half way across the valley, also opened its hospitable doors to many who came down, and lying about midway between a spacious garage gave shelter to the contestants' cars.

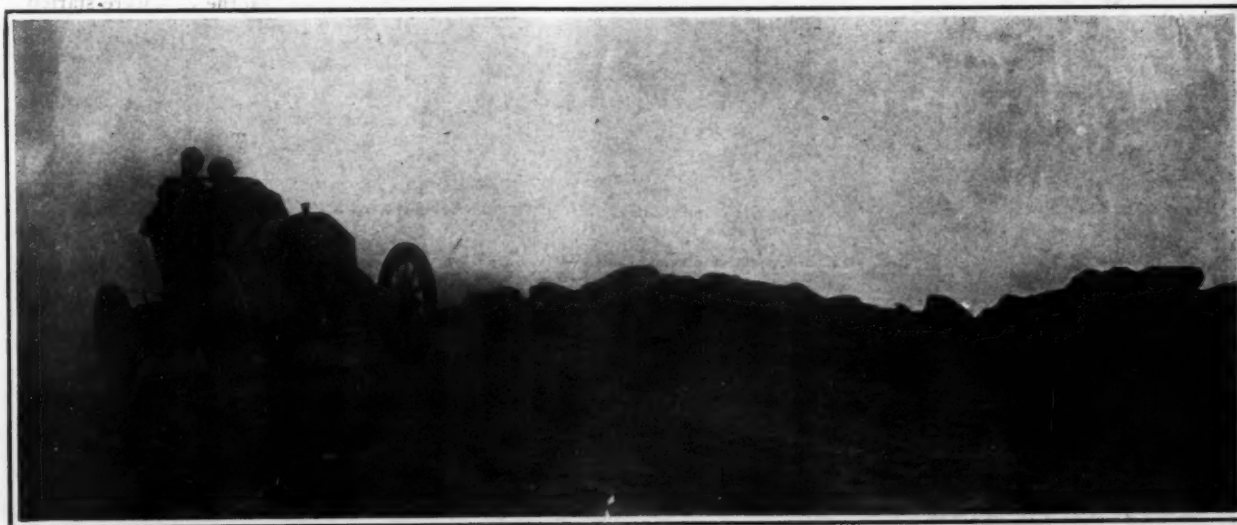
To go from Bretton Woods to the Glen House at the foot of the eastern slope of Mount Washington meant a journey of thirty-six miles on the mountain roads for the contestants and those who wanted to see the start. A pleasant alternative for the spectators was the trip to the top of Mount Washington on the famous old rack

road, with which connection was made by the steam cars from Bretton Woods. Looking down from the top close to the finish mark, the Glen House was in view, 4,600 feet below, and a very short stretch of the road leading to the start. From the summit of the mountain a short turn in the road, less than half way down, was the only spot in the road where the cars could be seen until they were within a few hundred yards of the line.

Racing arrangements were simple, and the management good. S. M. Butler and A. R. Pardington, of the A. A. A. racing board, started and stopped the cars, alternating at the top and bottom on successive days. Timing was in the expert hands of the Chronograph Club, of Boston, and telephone communication was arranged between the start and finish, and the intermediate "two-mile," "half-way" and "six-mile" stations. Cars were usually sent away at half-hour intervals and at agreed times all those which had made the ascent were sent back to the start. To signal the start on the arrival of each car at the top smoke rockets

were to be used, but those on the ground turned out to be of the ordinary Fourth of July variety and did not push the clouds away so as to be seen from below. Charles J. Glidden, the world's touring record holder, however, established a signal service of his own invention, and so the need of visible signals was not felt. With C. W. Barron, of Boston, as aide, he took control of the telephone in the Summit House, about 50 feet above the finish line, and with a megaphone and a good pair of lungs bridged the distance between the timers' stand and the 'phone connected with the starting point.

Glen House, in the vicinity of which the start was made, stands at an elevation of 1,650 feet above the sea, and when the race is run the climber readily believes he is just 6,300 feet above high-water mark. A private road, from which automobiles are at all other times barred, is the connecting link. Its surface is sandy where the rocks do not show through and is broken in 350 different places by water bars or thank-you-mam's that bumped many a



HARRY HARKNESS DASHING OUT OF THE CLOUDS WITHIN FIFTY FEET OF THE FINISH—RECORD TIME 24:37 3-5.

driver's heart out of place on the risky turns. It is a steady, motor-testing rise from the bottom to the top, with none of those convenient little down-grades that give a chance for gathering speed on the average mountain road. The stiffest grade is about twenty per cent., and the average for the eight miles of zig-zag and curves is seventeen per cent. Its average width is about twelve feet, though the surface is so uneven that it would be necessary to pull a car partly up on the inside bank to give safe passage to a car going at speed. When the timber line is passed the mountain side pitches off abruptly and a little error in steering would hurl a car and contestants several hundred or thousand feet below.

Few of the "natives" showed much interest in the trials, and, as the number of guests in the Summit Hotel was small, the "gallery" was composed chiefly of automobile enthusiasts, whose faith in the venture was highly rewarded by a succession of record-breaking feats.

HILL CLIMBING ON MONDAY.

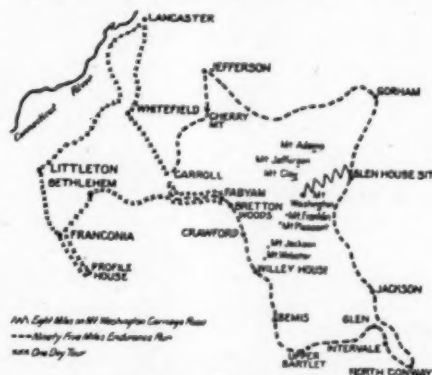
Staff Correspondence.

SUMMIT HOUSE, Mt. Washington, N. H., July 11.—It was a dramatic moment this afternoon when F. E. Stanley, of Newton, Mass., rounded the sharp curve 100 feet from the finish line and put a record of 31:41 2-5 to the credit of his 7-horsepower steamer, nearly half an hour before James L. Breese, in his 40-horsepower Mercedes, had rushed into view and put the gasoline car figures at 34:09 4-5 the lowest of the day. Clouds had settled down on the Summit when at twenty minutes past 3 o'clock Mr. Glidden announced from the hotel platform overhead that Stanley had started up the hill. Would seven horsepower do better than forty? was the query, more sportsman-like than scientific, that caused the faithful few to group closely about the timers' table. In fifteen minutes he had passed the halfway house. Would he keep this speed to



OTTO NESTMANN IN THE STEVENS-DURYEA SWINGING ROUND A BAD CORNER

the end. Another brief wait and then swinging around the pile of rock in a splendid flight of speed the steamer straightened for the line. In the background the jagged



SKETCH MAP OF THE MOUNTAINS

line of rocks that marked the edge of the precipice were silhouetted on dense and rolling masses of cloud, and at the tiller, with a smile of victory on his face, was the man

who had driven down from Boston just to show how easily it could be done. A rousing cheer was given when the scorers megaphoned his time to be repeated by telephone to the crowd 4,600 feet below. He had cut the time made by his brother, F. O. Stanley, just five years ago, by more than an hour and a half.

Although Mr. Stanley's performance was the event which stands out in the greatest prominence, the series of demonstrations of hill climbing powers that led up to it served to make up one of the most remarkable competitions in automobile history. That fourteen of the sixteen cars that ascended the mountain during the day broke last year's record is an indication of the character of sport. These fourteen cars gradually lowered the mark by cuts of minutes from 1:48:00 to 31:41 2-5, giving an interest to the sport which was truly intense. Happy was the record breaker who could claim the title for a half hour.

Those who wanted to see the start had to be out of bed early, for the first car was sent up at 5 o'clock in the morning. From that time on until nearly 4 o'clock in the afternoon the cars were started by Mr. Butler without a hitch. The officials, including "Senator" W. J. Morgan, to whose initiative and persistence the splendid sport was due, were kept busy giving instructions as the score or more of competing cars arrived at the base. Local weather sharps promised a fine day, and the few showers of the day before had helped to pack the sandy course.

Record breaking began with No. 1, when Mr. Phelps left the start near Glen House in the valley and landed at the summit in 56:15 2-5. Not content with this performance, Mr. Phelps drove his car up a 25 per cent. grade to the platform in front of the Summit House and left it there as a challenge to all comers. The two cars that followed Mr. Phelps, the Cameron runabout and the Orient buckboard, met with difficulties and each took more than two hours on



ARTHUR BATCHELDER, WHO MADE THE REMARKABLE TIME OF 34:11.3-5 ON A METZ.

the trip. As each of these cars is fitted with air cooled engines and of comparatively low horsepower the showing made was excellent.

The fourth car started was an Oldsmobile, driven by Benjamin Smith, which climbed in 1:25:14 1-5. This completed event No. 1, and the next car sent away was a Columbia gasoline entered in event No. 3. This car set the time for its class at 1:15:21 4-5. After the arrival of the Columbia at the summit, there was an intermission, Webb Jay puncturing the tire of his White steamer when half way up, and went back, and the Haynes-Apperson met with trouble in the shape of a broken valve. It kept the course, however, and finished in 1:32:25 2-5.

Just before eleven o'clock the real excitement of the day began. At 10:48:07 2-5 H. Ernest Rogers in a 24-horsepower Peerless whirled up the road and over the finish in 48:07 2-5, a serious cut in Mr. Phelps's figures. Twenty minutes later Harry Fosdick rushed in with his Winton touring car in 54:00 2-5, claiming an allowance of 4 minutes for being blocked on the road by the Haynes-Apperson car, and five seconds later Percy Pierce brought in the Pierce Arrow in 44:31 4-5, taking the laurels from Mr. Rogers. His triumph was brief, however, for in about seven minutes A. E. Morrison in a 24-horsepower Peerless touring tonneau reduced the time to 36:44 1-5. There the record remained during the forenoon. The Peerless performance kept the enthusiasts busy. The car was of the regular stock type with tonneau, and it came in grandly, the engine running with great regularity.

Alexander Winton had poor luck with his new 4-cylinder side entrance tonneau which he drove himself "to see what it could do," he afterward explained. Evidently the car had not been tuned up to record pitch, for it occupied 1:33:00 in the climb to the clouds.

There was now an intermission for luncheon at the Summit House on the top, and the Glen House below, and in this time the competing cars were sent down at short intervals, all being reported without mishap at the bottom. Brakes suffered a good deal and mechanics were kept busy wetting them down, and the strain on the drivers was even greater than coming up, the cars showing a natural desire to get out of control. As a test of mechanical construction the going down, while not as severe as the going up, was a good demonstration.

During the afternoon the interest centered on the 40-horsepower Mercedes of J. A. Breese, and the little Stanley steamer. Mr. Breese came up in fine style, but lost a trifle of time by mistaking the bend at the finish for the finish itself. His car was geared high and so he was compelled to stay on first speed, though he lost time in trying to get on second speed at several places in the road. His car reduced the record to 34:09 4-5. Mr. Breese had not enjoyed his honors much more than ten minutes, how-

ever, when they were snatched away by Mr. Stanley. Several other cars ascended the mountain during the day in slow time, and Mr. Stanley's record remained unscathed. The summary of the first day's contest follows:

RESULTS OF EVENTS CLASSIFIED BY PRICES.

SPECIAL—L. J. PHELPS OF EVENT NO. 4.

No. of Car.	Make.	Driver.	H.P.	No. of Cyl.	Weight	Price.	Time.
1	Phelps	L. J. Phelps	20	3	1,700	\$2,500	1:56:15 2-5
EVENT NO. 1—RUNABOUTS, \$650 OR UNDER.							
14	Olds	Benj. Smith	—	1	—	650	1:25:14 1-5
9	Cameron	E. S. Cameron	6	1	850	650	2:07:08 3-5
7	Orient	W. B. Jameson	6	2	650	550	2:09:38 4-5
EVENT NO. 2—\$650 TO \$1,000							
2	Stanley	F. E. Stanley	6	2	800	670	1:31:41 2-5
11	Prescott	A. L. Prescott	7½	2	1,400	1,000	1:08:34 1-5
12	Stanley	G. J. Peacock	7½	2	1,400	1,000	1:10:29 2-5
EVENT NO. 3—\$1,000 TO \$1,800							
25	Columbia	H. W. Alden	—	2	—	1,750	1:15:21 4-5
5	Haynes-App.	Frank Nutt	12	2	1,500	1,450	1:32:25 2-5
EVENT NO. 4—\$1,800 TO \$2,000							
24	Winton	Harry Fosdick	20	2	2,000	3,000	1:50:00 2-5
1	Phelps	(run in special class)					1:56:16 2-5
EVENT NO. 5—\$3,000 TO \$6,000							
17	Peerless	A. E. Morrison	24	4	2,500	4,000	1:36:44 1-5
8	Pierce	Percy P. Pierce	24	4	2,500	4,000	1:44:31 4-5
18	Peerless	H. E. Rogers	24	4	1,990	3,700	1:48:07 2-5
31	Winton	Alex. Winton	—	4	—		1:33:00
EVENT NO. 6—\$6,000 AND UPWARDS							
26	Mercedes	J. L. Breese	40	4	2,200		1:34:09 4-5

TUESDAY'S RACING EVENTS.

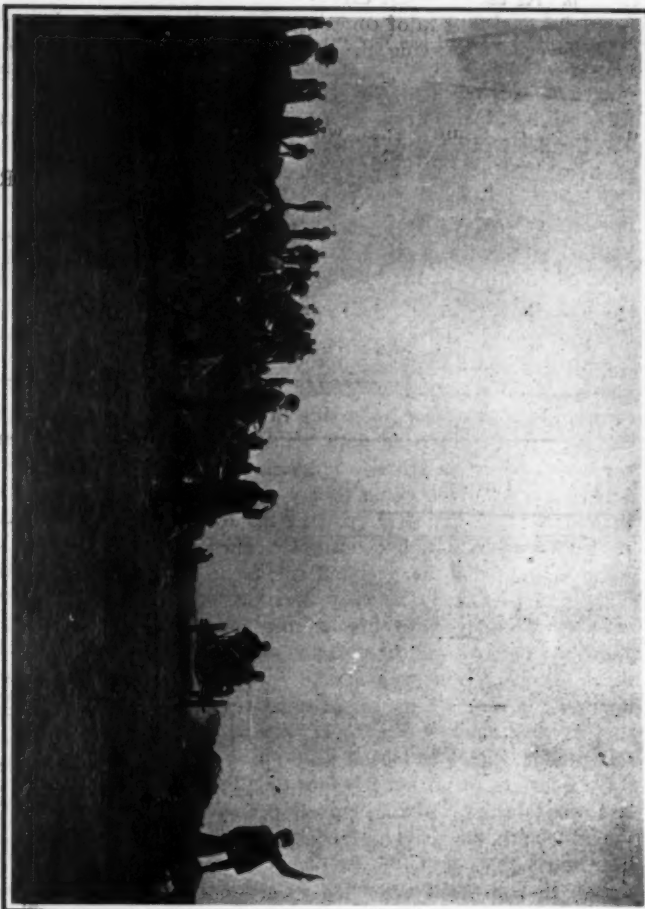
Staff Correspondence.

SUMMIT HOUSE, Mount Washington, N. H., July 12.—Record smashing was again a frequent occurrence to-day, and this was really the most exciting day's sport. The fastest time for the meeting, and a record that will probably stand longer than those broken this year, was 24:37 3-5 made by Harry Harkness in his new 60-horsepower Mercedes racer. He had driven by road to the base of the hill, and had punished his machine very badly. The front springs were down and on one side the upper leaf of the front spring was cracked. A good deal of time was spent getting the racer in condition and rough blocks of wood were tied to the inside of the springs to act as distance pieces. As Mr. Harkness had never been on the mountain road before it was suggested to him that he make a preliminary trial before going against time. This he said would not be necessary, and at 3:21 o'clock he was started from the bottom. His car had been fitted with suitable sprockets, and he was able to get away at good speed and held his second all the way up. He was reported at the 2-mile post at 3:27, and the half-way house at 3:32 1-2. Then the interest grew apace with various good guesses being made as to his probable time. At 3:41 1-2 the six mile post was passed, and the roar of the exhaust prepared the timers for his arrival at 3:45:37 2-5 in the record time of 24:37 3-5 for the eight miles of tortuous up grade. Some of those at the top feared that the heavy masses of cloud that seemed to envelop the entire mountain

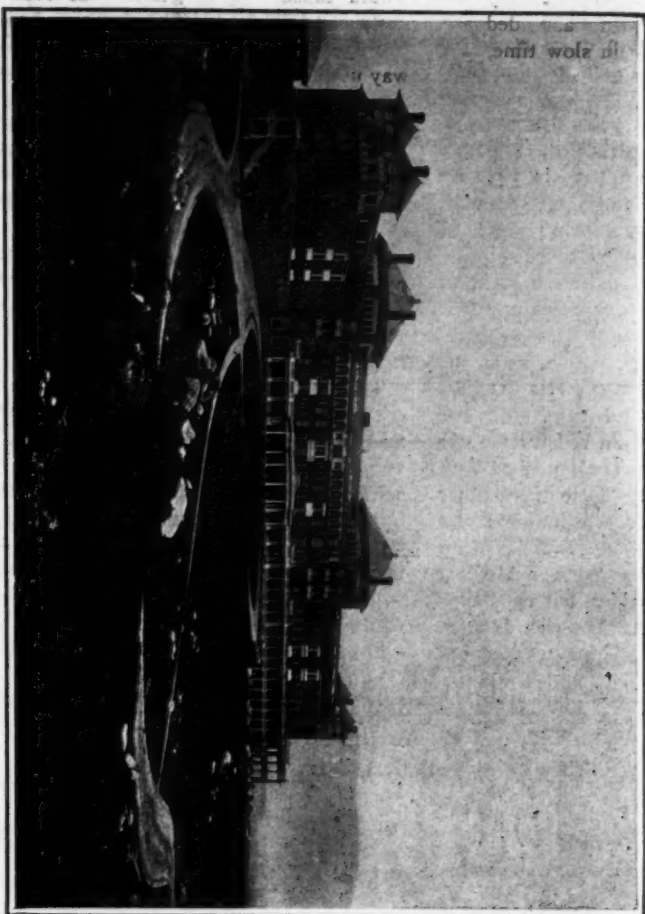
would cause him to get off the road—to destruction perhaps. The run figured out an average speed of 20 miles an hour. On the way up the combination of water bars in the road and springless springs on the car made it rough going, and in places as the rear of

the car slewed on the turns the wheels tipped large fragments of loose rock from the edge down the steep mountain slope. Later in the afternoon the cold fog was made more disagreeable by drenching rain and Mr. Harkness decided to go down to Bretton Woods with the other visitors on the rock railroad and send his mechanic alone down the hill with the car. In both this Mercedes car and that of Mr. Breese the dangers of descent were greatly increased by the peculiar clutch construction. Other big cars had gone down rather easily with the switch off and the low gear and clutch in, the cylinder compression making a very satisfactory addition to the braking equipment. In the Mercedes car, however, the coil spring clutch will not hold securely when the clutch shaft speed exceeds that of the crank shaft and it was necessary to water the brakes in these cars when going to the bottom.

Before Mr. Harkness had a try at the climb Mr. Stanley had set the record at a point where it appeared to be safe for some time to come. Mr. Stanley had been quoted as saying that a half hour was about the right time for his car, so when he stripped it for the open event to-day his trial was looked forward to with much interest. Leaving the base at 9:21 o'clock he was only 6:30 making the first two miles. In 13:00 he had reached the half-way house, bettering his previous record to that point by 2:00. Six miles, two-thirds of the climb, were covered in 22:00, and the last two miles were reeled off in 6:19 2-5, making his elapsed time 28:19 2-5, a cut of 3:44 in his record made Monday.



A. E. Morrison Reaching the Finish Line in the Peerless Touring Car Stripped Down.

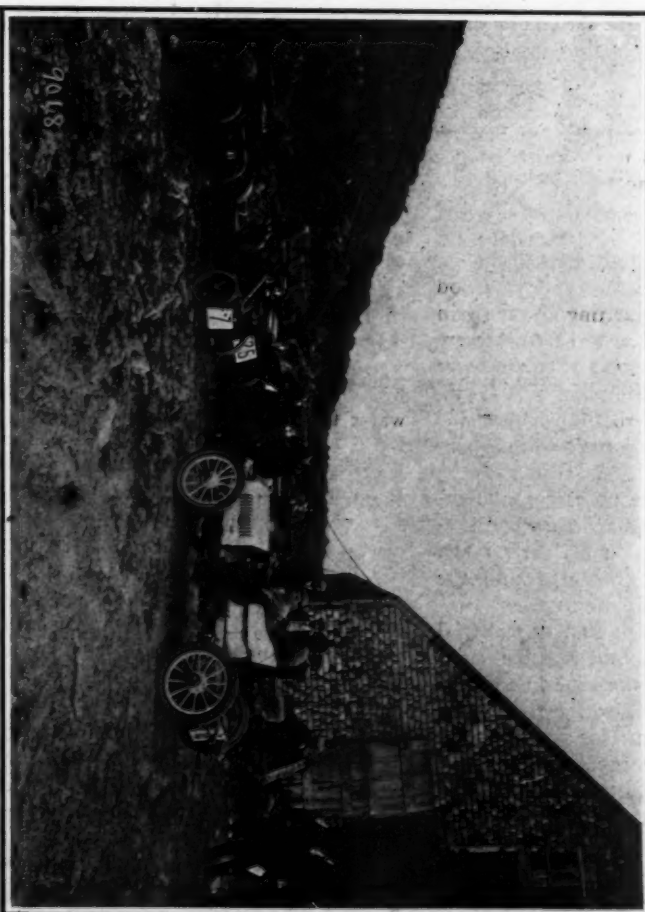


The Magnificent Mount Washington Hotel at Bretton Woods Used as Headquarters.

PHOTOGRAPHS OF CLOUD EFFECTS AND SCENES ON TOP OF MT. WASHINGTON (6,300 FEET), ON THE WAY DOWN, AND IN THE VALLEY BELOW.



Stanley Rushing Along at an Average Speed of 17 Miles an Hour up in the Clouds.



H. E. Rogers After His Arrival on Top in His 24-Horsepower Peerless Car.

Mr. Stanley got a splendid welcome and was induced to run his car up skids to the platform of the Summit Hotel where it was photographed repeatedly with one of the rack railroad locomotives as a background. Mr. Stanley had stripped his car even of the seat cushions, and was rather used up with the jolting he got on the way. Both to-day and yesterday he was accompanied by a youth, who, with a stop-watch in hand, checked the time at the two-mile marks on the way up, so that they had a line on their performance.

Although none of the other contestants besides Mr. Harkness lowered Mr. Stanley's colors, there was record breaking in several classes. A. E. Morrison with his Peerless car which he drove Monday in 36:44 1-5 in full rig, essayed the climb to-day, stripped in class 8, and not only reduced his own record to 29:06 4-5, but until Mr. Harkness started held the gasoline car record. This was previously held by Mr. Breese, who on Monday with his 40-horsepower Mercedes car covered the distance in 34:09-4-5. Mr. Morrison made a fine effort for honors, and it was a matter of great regret that he was blocked on his way up by an Oldsmobile which had been sent up about three quarters of an hour before the Peerless was started. Mr. Morrison overtook the runabout, the driver of which did not hear the signals and the Peerless car was forced to stop until the Olds turned out. In getting past Mr. Morrison overran the edge and had to get assistance from some pedestrians to get the car on the road again. In this mixup he lost the bonnet, and a bolt in the radiator came loose, causing the cooler to get out of line with the fan driving pulley, and so the belt was lost. The remainder of the trip was made with imperfect radiation. When the Olds finally arrived at the top, the occupants corroborated Mr. Morrison's statement and he was allowed two minutes, which he accepted as satisfactory, though he figured the loss at four minutes. His official time therefore was 29:06 4-5.

James L. Breese made another try to-day in his 40-horsepower Mercedes, and cut his time down to 31:22 4-5. His car was geared up too high and he was unable to get out of first speed anywhere. He drove the car both up and down on both occasions. Coming up to-day he lost a kit of tools, which were jolted out of the car and strewn about the road.

The first to start in the morning was Webb Jay, who had repaired the tires on his White steamer. Owing partly to a delay in getting water supplies on the way he did not make any record time and finished in 42:19 4-5. Mr. Alden in the 12 horsepower double opposed cylinder Columbia was the next man up, and on the way lost a fan belt so that he had to stop for water. His time was 51:50 2-5, a cut of several minutes from the previous day's efforts.

L. J. Phelps in the 20-horsepower touring car had some minor troubles that also re-

duced his figures, and he got in in 47:20 2-5. F. H. Peabody of Boston came up in an Olds and cut the time of that machine from 1:25:14 1-5 to 1:20:46.

Both the Metz motorcycles did remarkable work. Arthur Batchelder, a young rider from Lowell, got up in 34:11 3-5. He had to dismount three times on the way, each time the cycle speed being too slow for the motor, which in consequence stopped. He did not seem nearly as tired as some of the automobilists who had backs to their seats, and he said he expected to go down more easily than he had come up, using the motor compression to brake. His machine appeared to be very fit and it got up in excellent condition. It was a remarkable exhibition of what could be accomplished with a two-horsepower motor. None of the other and better known motorcycle builders was represented in the race. F. R. Dickenson also started on a two-horsepower Metz at the same time as Batchelder, but consumed 52:42 2-5 in the ascent. He was a much heavier man and his machine was geared

By the time all these contestants had finished the clouds completely covered the mountain, and the rain began to fall very heavily. Word was telephoned up from the bottom that Mr. Morrison in the Peerless had again started up, but the combination of bad weather and a machine damaged by the mishap earlier in the day caused him to stop.

The Consolidated Motor Truck also made a start, but the roads had become rather dangerous and the driver, J. Mallon, was persuaded to return after reaching the two-mile mark.

To permit all of these events to be run off the special train on the rack railroad was held from 4 o'clock until 6:30 p. m., and by that time the weather on top had settled down to a steady rain, accompanied by dense fog. If the wind does not change it is doubtful if any other trials can be held to-morrow, the committee deciding to await weather conditions in the morning before making an announcement.

Following are summaries of to-day's races:

RESULTS OF EVENTS CLASSIFIED BY WEIGHTS.

EVENT No. 7—NOT OVER 1,000 POUNDS

No. of Car.	Make.	Driver.	H.P.	No. of Cyl.	Weight.	Price.	Time.
19	Olds	F. H. Peabody	4	1	875	\$650	1:20:46
21	Olds	B. Smith	7	1	1,000	650	2:16:55
14	Olds	Turner	—	1	—	650	2:25:51 2-5

EVENT No. 8—1,000 TO 2,000 POUNDS

17	*Peerless	A. E. Morrison	24	4	2,500	4,000	:29:06 4-5
3	White	Webb Jay	10	2	1,900	2,500	:42:19 4-5
1	Phelps	L. J. Phelps	20	3	1,700	2,500	:47:20 2-5
25	El. Veh. Co.	H. W. Alden	—	2	—	1,750	:51:50 2-5
15	Rambler	A. Gardner	16	2	1,650	1,100 (did not finish)	

*Elapsed time, 31:06 4-5, 2 minutes being allowed for delay.

EVENT No. 9—OPEN TO ALL

31	Mercedes	H. S. Harkness	60	4	—	—	:24:37 3-5
2	Stanley	F. E. Stanley	6	2	800	670	:28:19 2-5
26	Mercedes	J. L. Breese	40	4	2,200	—	:31:22 4-5
23	Stev.-Duryea	O. Nestman	7	2	1,300	1,300	:40:35

EVENT No. 11—MOTOR CYCLES, 2 H.P. OR OVER.

27	Metz	A. Batchelder	2	—	110	212.50	:34:11 3-5
28	Metz	F. R. Dickenson	2	—	110	212.50	:52:42 2-5

rather high. Twice on the way up the chain jumped the gears and had to be replaced.

Arthur Gardener, driving a 16-horsepower Rambler, was the only contestant whose machine was really disabled. When near the two-mile mark his transmission broke and he retired.

Benjamin Smith came up carrying "Senator" Morgan in an Olds and they had several kinds of trouble. On his arrival Mr. Morgan said he had graduated into the mechanic class on the way up.

Otto Nestman made his first official trial on the mountain to-day, doing the eight miles in 40:35, part of the time in fog and rain. He afterward claimed the right to be allowed to compete in No. 3 class then closed. This was for regular stock cars listed from \$1,000 to \$1,800. He based his protest on the ground that he had not been notified on what day that class would race, and had supposed that he could go in this class at any time after his arrival on the hill climbing contest days.

NOTES OF THE CONTEST.

Those who came to scoff remained to praise.

* * *

On Tuesday afternoon it was cool enough on the summit to have fires in the sitting room stoves in the hotel.

* * *

"Senator" W. J. Morgan is certainly entitled to one of the prize medals as "discoverer" of the grandest hill climbing course on the Continent.

* * *

The proprietors of the Mount Washington road, with characteristic native shrewdness, tied a string to the road permit by imposing a charge of \$2 for every machine that went up the mountain.

* * *

Many of the officials and participants brought their wives and daughters along, so the social features were not neglected, and

there were other subjects of conversation besides times and sprockets between events.

* * *

It was the intention to hold a series of dashes up the mountain against time on Wednesday. When morning came, however, the rain was coming down so heavily that the officials decided to hold an afternoon parade in the valley instead.

* * *

On Monday S. M. Butler started the cars up the hill and A. R. Pardington acted as the A. A. A. official at the finish line on top, with Augustus Post as an enthusiastic aide. On Tuesday the positions were reversed.

* * *

On several of the cars the mechanic got out and helped push the machine over the bad spots, and especially at corners. In one case both driver and mechanic got out and boosted the machine along. These cars did not make records. Any car that



HARRY HARKNESS IN HIS 60-H. P. MERCEDES. PHOTOGRAPHED IN THE CLOUDS ON TOP

of comforts, and they were not disappointed. The new Mount Washington Hotel has accommodations for about 500 guests, and is one of the most beautifully fitted up vacation hotels in the country. The decorations and furnishings are in exquisite taste, with

ard. At the Mount Pleasant Hotel the surroundings are more homelike, and, indeed, a choice is difficult.

* * *

Gold, silver and bronze medals for the winners were on exhibition at the Mount



CONTESTANTS' CARS AFTER ARRIVAL AT THE FINISH. NOTE BARN CHAINED DOWN TO THE ROCKS IN BACKGROUND.

went slow enough for a man to push it didn't stand much chance of a medal.

* * *

Those who had attended the Ormond Beach races expected much of the hotel managers, Anderson and Price, in the way

not a vulgar note in the entire composition. The color scheme is white and green. An immense swimming pool and a ball room large enough for a State function are included in the facilities for enjoyment. The cuisine is quite up to the New York stand-

Washington Hotel. They are of generous size and artistic design, and will form valuable additions to certain manufacturers' collections.

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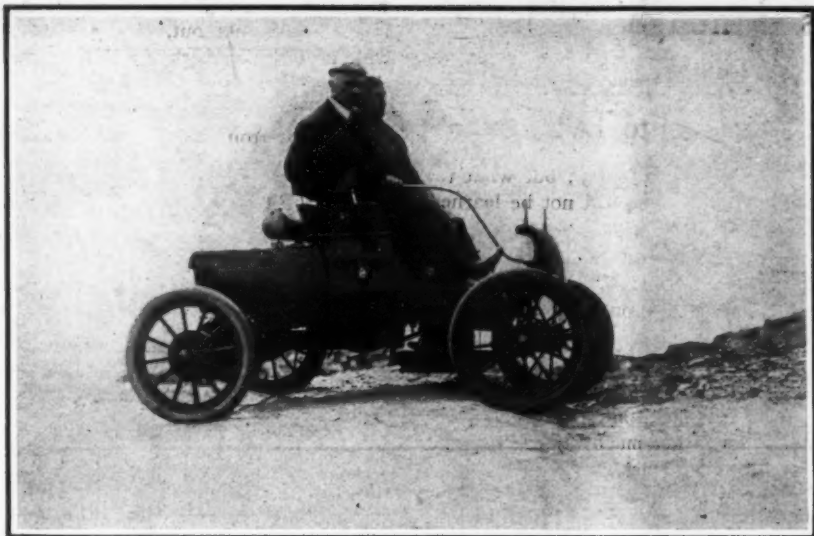
Newspaper men were greatly interested in the complete daily plant on top of the mountain, where *Among the Clouds* is published during the season. Frank H. Burt, the editor, developed into an auto enthusiast and gave the contest lots of space and scare heads each day.

* * *

Owing to the unavoidable delay in getting consent from the owners of the carriage road up the mountain to open it to automobiles on the days of the contest, the time for spreading advance information about the meet was very short. As a consequence the promoters did not expect a large attendance either of contestants or spectators. Naturally enough, too, the contest had a decided Boston flavor. Few New Yorkers outside of the officials and those professionally interested were on the mountain.



COACH HOUSE USED AS A GARAGE NEAR THE STARTING LINE IN THE GLEN.



BENJAMIN SMITH IN AN OLDSMOBILE, ON HIS WAY UP THE MOUNTAIN.

Changes of light were so frequent and rapid that the photographers were obliged to guess at results, and constantly readjust lens openings and shutter speeds. Some of the most interesting pictures were made under the worst conditions of light.

* * *

A few of the cars have special equipments, but those that made records were of the ordinary stock types. A doubter who put a query to Mr. Stanley was instantly met by an offer to sell the car on the spot at the regular stock price. The critic did not buy.

* * *

Considering the shortness of time for preparations and the difficulties of the task the race management was remarkably successful. The solitary hitch in the two days' sport was the blocking of Morrison's Peerless by an Olds on Tuesday. Next year fast and slow cars will not likely be sent up in the same groups.

* * *

After forty years of steady uneventful work the old rack railroad on Mount Washington woke up on Tuesday evening, and landed the passengers of the late special at the bottom in 50 minutes. It had been inoculated with the record breaking virus. The best previous time was 55 minutes from the summit to the base, a distance of three and a half miles.

* * *

Many little improvements will be made in the arrangements for the next meet. The finish line will probably be moved down around the corner to the last straightaway, so that there will be more room for the competing cars on top and no danger of collision when they arrive. Direct electrical connections between the top and bottom and intermediate points may be put in. The rocket signals are useless up in the clouds.

* * *

Absolute accuracy of timing within the limits of human powers of observation was

guaranteed when the Boston Chronograph Club was requested to hold the watches. The club representatives were John Kerrison, E. O. Windsor, Frank Ross and George Lowe. They worked in pairs at the start and finish, and so well was the work done that not a single difference occurred in the observations.

NASHVILLE RACE MEET.

NASHVILLE, July 11.—So successful was Nashville's first automobile race meet, held June 13, that another, on a much larger scale, is being planned for Labor Day. This meeting will be given under the auspices of the Cumberland Park Driving Club and there will be seven or eight events. The program committee is in correspondence with several owners of racing cars.

GOOD RUNS INTO NEW HAMPSHIRE.

Several excellent runs over the White Mountain roads to Bretton Woods were made before the Mt. Washington hill climbing contest came off. One of these was made by Herbert W. Alden, of Hartford, who drove the 14-horsepower Columbia gasoline car that was entered by the Electric Vehicle Company for the hill climb. Leaving Hartford Thursday morning Mr. Alden reached Lakeport, N. H., at 7 p. m., going through Springfield, Worcester, Nashua and Concord, covering 210 miles on the day's run. He arrived at Bretton Woods at 4 p. m. the second day, having averaged thirteen miles an hour over hilly and sandy roads.

Another excellent run was made by William F. Plant and Mr. Ross, of Boston, in a Model L Packard car that Mr. Plant had bought July 7 and which had never been run except in testing before leaving the factory, and in a brief tuning up before the start. A run of 230 miles from Boston to Bethlehem, N. H., over good, medium and very bad roads, was made in 14½ hours elapsed time, and 12 hours actual running time, with a gasoline consumption of 13 gallons, as recorded by Mr. Plant. Thus the average running rate was 19 miles an hour and the mileage per gallon of fuel 17½ miles.

A recent issue of the *Indian Sporting Times*, published in British India, contains an illustrated article describing the mountaineering feats of an Oldsmobile runabout driven by Dr. J. M. Tarachand. The machine was sent up the three Ghauts to Mahableshwar, India, from Khandakla, the same car having previously climbed the Bhore Ghaut.



F. E. STANLEY IN THE RECORD BREAKING CAR ALONGSIDE THE RACK ROAD LOCOMOTIVE, IN FRONT OF THE SUMMIT HOTEL ON TOP OF MT. WASHINGTON.
Messrs. Kerrison, Windsor and Butler standing beside car.

Merger Plan Falls Through.

Failure to Agree on Proxy System Ostensible Reason—Officials of A. A. A. and A. M. L. Disinclined to Talk.

THE abrupt termination of negotiations for the amalgamation of the American Automobile Association and the American Motor League, briefly announced in these pages last week, came as a great surprise to the membership of both bodies, a large majority of which had voted favorably on the plan of merger drawn up and published early in April. The report a month ago that a hitch had arisen in the drafting of the constitution and by-laws, over the question of proxy voting for individual members, did not seem to presage failure, since the disagreement as reported did not seem to be insurmountable, and hardly justified the pessimistic tone taken by certain representatives of the A. A. A. as to its outcome. It is evident now that the difficulty was in reality much more serious, and it appears to have involved points of fundamental importance which were not mentioned at all at that time.

Exactly what these points at issue were is something of a mystery still, and the leaders of neither side have shown conspicuous willingness to state all the facts. This is particularly true of the A. A. A. officials, who for the most part contented themselves with quoting the formal statement given out by President Whipple of the A. A. A. after the meeting of the executive committee July 6. That statement was as follows:

"The proposed merger between the American Automobile Association and the American Motor League will not take place, since the committees which were appointed to draw up a constitution did not agree, this agreement on a constitution having been a condition precedent to the proposed merger."

That one, at least, of the points at issue was that of proxy voting seems to be made clear by the interview with Secretary Butler, quoted hereafter. Although it might seem to be unimportant, Mr. Butler points out that in reality the proxy system might be seriously abused, since the individual member, with only one vote and no way of using it except by proxy, would not be likely to inquire too carefully how his proxy would be used: and moreover it would be next to impossible to check and verify several thousand proxies at the annual meeting. One of the A. A. A. directors, who did not wish his name to be used, said that the A. A. A. committee had offered to recognize and give representation to clubs of even as few as three members, which would seem to confirm Mr. Butler's statement that the point objected to was not that of representing scattered members, but the manner of so doing.

It was learned from another source that the proxy suggestion was not a feature of the draft of constitution and by-laws submitted by Mr. Potter, but was made later

and in a tentative way only; but what the original proposal was could not be learned.

From conversation with other men in the A. A. A. it was inferred that the financial condition of the A. M. L. was not such as to make amalgamation on equal terms easy. None of them cared to be quoted on this point, which does not appear to have come up at all in the negotiations leading to the plan of merger, but all agreed that that organization would get much the best of the deal. It seems, in fact, to have been the general impression that the A. M. L. had more to gain and less to lose by consolidating than the A. A. A., and this impression was reflected in the greater indifference shown by the membership of the latter when the merger was voted on. Certainly, aside from such resentment as the A. A. A. membership may show over the refusal of their officers to explain matters, most of the disappointment seems to be felt by the other side.

On the face of the matter, the A. A. A. has put itself in the wrong by disregarding the agreement embodied in the plan of merger, under which the constitution and by-laws were to be drafted. On this point the plan of merger reads as follows:

7. A committee consisting of two members selected from the present membership of the A. M. L. and a like number selected from the present membership of the A. A. A. shall prepare a constitution and by-laws to serve the purposes of the united body and shall present the same to the governing board for its adoption. The constitution and by-laws so adopted shall remain in force until amended or suspended at a regular or special meeting of the united body upon due notice. Such constitution and by-laws shall among other things, make due provision for the continuance of clubs, local organizations and individual membership in the American Motor Association and shall harmonize as closely as practicable with the constitution and by-laws of the A. A. A. and A. M. L. as framed prior to the merger of the two bodies."

The governing board referred to is apparently that mentioned in section 3 of the same plan:

3. The general management and control of the affairs, funds and property of the united body shall be vested in the governing board, to be composed of ten directors to be appointed by the A. M. L. and a similar number to be appointed by the A. A. A. The directors so appointed shall include the officers named in paragraph 2.

Although the point is not specifically covered, President Potter contends with seeming reason that in case of disagreement each branch of the committee should report to its own section of the board of twenty, and should not in any case receive instructions from the board of governors of its organization. Mr. Potter's statement and interview deal chiefly with this point and

with the loose organization of the A. A. A., which, he points out, cannot always control its own members, and whose membership cannot control its officers.

President Whipple of the A. A. A., when seen at Bretton Woods, Mt. Washington, referred to his brief statement of July 6, and refused to be quoted further. He said, however, that the Board of Directors of the A. A. A. had acted in the matter with entire unanimity.

OFFICIALS ARE INTERVIEWED.

Secretary Butler, who with Emerson Brooks represented the A. A. A. in the conferences to draft a constitution and by-laws, expressed himself quite decidedly on the subject of voting powers, and declared that the A. A. A. never would consent to a system of proxy voting, which, he said, Mr. Potter wanted. When asked if any other methods of taking care of the individual members' votes, besides the proposal to give proxies and the A. A. A. suggestion that they become associate members of the nearest clubs, had been considered, he replied in the affirmative.

"We offered to consider any plan Mr. Potter might suggest," he said, "for connecting the individual members together in clubs, district organizations, or anything of the sort, no matter how slender their organization might be, so long as they sent regularly elected delegates. Our sole objection was to the proxy system. You see, when a club sends a delegate, the chances are that he is instructed, and at all events he knows the sense of his club and is responsible to it. If, however, we allow proxies, it will be the easiest thing in the world for someone to write around to all the individual members, and get several thousand proxies which he can vote in any way that suits him. As soon as that happens, we shall have all sorts of political dickers and wire-pulling, and men will be working for themselves, not for the good of the sport. The organization will lose standing and will rapidly go to pieces so far as real influence goes. There is an article in the constitution of the A. A. A., aimed to guard against that very thing by forbidding any representation by proxy.

"Again, a club is a responsible body. It has officers and books, and you can get at it. But how can you get at a lot of irresponsible individuals, scattered all over the country, who choose to give their voting power to the first comer?"

"The A. A. A. is made up of men and clubs of the very highest standing, who have no personal interest or profit to serve, and who are working shoulder to shoulder for the best interests of the sport. It has kept free of politics thus far, and it wishes to remain free. Its membership now numbers thirty-three clubs, with more being constantly added, and covers all told about 2,500 members. The dues for unattached members are \$1 initiation fee and \$1 annually, and the roll of these members is steadily

growing. They have all the privileges of the organization, except the right of representation; and if they attend an association meeting in person they have the right to vote. It is worth something, you know, to belong to an organization which includes all the strongest clubs and the ablest and most influential men in the automobile movement, instead of existing mainly on paper."

To a query regarding the financial standing of the A. A. A., Mr. Butler explained that the treasurer made a report at every meeting of the directors and that the minutes of every meeting were sent to every club in the association. "There are no star chamber proceedings about it," he said. "The clubs have a right to know, and they do know, just how the money is being spent."

GEORGE E. FARRINGTON TALKS.

George E. Farrington, treasurer of the A. A. A., and one of the members of the original committee which drew up the plan of merger, was much less communicative, though this might possibly have been due to the week-end rush in which the interviewer found him immersed.

"There is little to say," he said, "except to repeat President Whipple's official statement after the last meeting. We approached the subject of the merger, all of us, with the feeling that it was a great pity that there should be two bodies, dividing between them the abilities and strength of the automobile movement, working at cross-purposes, and we were absolutely sincere in our wish to bring the two together for the best interests of both. We felt that in such matters as putting up signs, preparing maps, working for good roads, and in law work—Potter is a crackjack at law work—a great deal more could be done by combining forces.

"But when we got together to discuss the constitution and by-laws, we found that the two bodies were so essentially different that no reasonable machinery could be devised that would take care of both and give them equal standing. Mr. Potter showed us a draft which he had prepared for the constitution and by-laws, closely modeled after those of the L. A. W. It was the most complicated thing I ever saw,—a whole lot of machinery involving districts, councils, lodges, and what not, which would have been utterly impracticable for us. He said it was necessary for his own organization. We conferred, and held meetings, and conferred, for three months, and couldn't get together after all. So we had to give it up."

"Was the main difficulty about the arrangements for voting?" was asked.

"That was one, but there were others as well, a lot of them. It would take a day to enumerate them all. The two bodies are essentially different; that is the whole story."

When asked if the membership and resources of the A. M. L. had been called in question, Mr. Farrington replied with a prompt denial.

"We did not care whether the A. M. L. had a hundred members or ten thousand," he said. "We took Mr. Potter's word for it that its membership was about so and so. We made no point of its resources, nor was any made of ours, further than that we have books which tell the whole story. No books were shown in the conferences, however. I wish to emphasize particularly that our sole wish was to get together on a basis of mutual equality. We were much disappointed when we found that this could not be done. The A. A. A. insisted on certain things which it deemed essential to its character as an association of clubs, and we gave the other side every opportunity to frame a plan which would accord with those essentials. This they failed to do."

Emerson Brooks, when approached on the subject, refused all information, beyond claiming that the A. A. A. had little to gain by amalgamation and much to lose, and that under the scheme of merger to which the A. M. L. would agree it would lose much more than it would gain. When asked for specifications he declined to talk.

ISAAC B. POTTER EXPLAINS.

Mr. Potter, when asked to state the matter from the standpoint of the American Motor League, expressed regret over the unforeseen turn affairs had taken, and requested time to prepare a written statement, saying that he did not wish to embroil matters further than had already been done. Accordingly he later handed the representative of this paper the following:

"The organized automobilists of America have declared unanimously and wisely in favor of one organization. They have unanimously approved a well-considered plan for the merging of two national bodies. They have entrusted to the officers of the A. M. L. and the A. A. A. the duty of executing the details of this plan, which the governing boards of both bodies had previously approved. It now appears that the work of merging has been interrupted, and for the time being, thwarted, and the rank and file of both bodies are entitled to a fuller explanation than can be compassed in a dozen words. Stated as briefly as the facts will permit, the situation is this:

"The merger agreement between the two organizations provides that each body shall appoint two members of a joint committee to prepare a constitution and by-laws, which shall thereafter be submitted to the approval and adoption of a governing board made up of ten members from the A. M. L. and a like number from the A. A. A.

"The two committee members from the A. M. L. were selected and met two members of the A. A. A., who were apparently clothed with power to prepare a constitution and by-laws, but as the work proceeded it soon became apparent that the A. A. A. members of the committee were mere delegates, acting under instructions, and utterly powerless to follow their own judgment, or to confer with their associates in most important matters; here careful deliberation was needed. Not only was this true, but their instructions were of the most drastic and extraordinary nature. They stated in substance to the A. M. L. members, that the directors of the A. A. A. would not accept a constitution and by-laws which gave to individual members a right of representation at meetings of the national body.

It was pointed out to them (a) that the merger agreement distinctly provided that the new constitution and by-laws should accord as closely as practicable with the constitution and by-laws of both the merging bodies; that the constitution and by-laws of the A. M. L. made distinct provision for the representation of individual members by delegates; and (b) that it was not for the directors of the A. A. A. or the directors of the A. M. L. to insist what should or should not go into the new constitution, but that questions of this kind must be decided by the joint governing board of twenty members as the merger agreement had provided. This argument had no effect. The A. A. A. members of the committee stated that they were under instructions and unable to act otherwise than they had stated.

"By invitation of one of the directors of the A. A. A., I appeared before that body and tried to dissuade them from a position so contrary to the agreement between the two organizations, and so obviously hurtful to the interests of the proposed new body. It is already well known that the A. A. A. directors refused, as I am told they still refuse, to observe the terms of the merger agreement, and from a careful examination of the conditions, I believe that no merger will now be perfected, and for the following reasons:

"1. There is no dominant or controlling force in charge of the affairs of the A. A. A., and by this I mean there is no executive having sufficient authority to carry out the terms of this agreement, or any other agreement which the individual directors of the A. A. A. see fit to repudiate. I say this with no wish to unkindly criticize, but rather to point out a weakness in the make-up of the A. A. A., which cannot be too speedily overcome. It does not seem to be, in the true sense, a national organization. The bulk of its membership is composed of clubs within the States of New York and Massachusetts. These clubs are formed into State associations, which are no part of the A. A. A., but are merely allied with it by some sort of agreement, which, for slight cause, might be quickly terminated. The New York association, for example, has a separate corporate existence, elects its own officers, adopts its own constitution and by-laws, which, by the way, contain no reference, immediate or remote, to the A. A. A. or to any connection between the two bodies.

"2. The Massachusetts association is, I am told, in many respects the same. Under these circumstances, the question of merger rests not between two national bodies, but between the A. M. L. and several component clubs and associations, each swayed by a desire to perpetuate the club feature, and by an unwillingness to recognize the great majority of automobilists who are not and never will be club members. Some important questions must be considered, therefore, before a combination of these bodies becomes possible. It must be settled whether the individual automobilist of the United States shall be entitled to the same rights as the club member or whether the entire body shall be dominated by a few clubs and a few club officers. It is, of course, proper that clubs should be encouraged and that local organizations should be recognized and supported, but it is neither convenient nor possible for every automobilist to become a club member, and it should be the aim of a national body to attract the support of all alike, and make the requirements of membership as easy, and the obligations as few as possible.

"This is the aim of the American Motor League, and its work will now be taken up

and carried along more vigorously and more successfully than ever.

ISAAC B. POTTER.
THE LEAGUE PRESIDENT TALKS.

Having given out the above formal statement, Mr. Potter submitted to be interviewed on some additional points. To a question whether the representatives of the A. A. A. had offered to care for individual members in any other way than by their joining clubs, he replied with an emphatic negative.

"Absolutely none," he said. "It had to be clubs or nothing."

"And did they admit specifically that they were instructed on that point?"

"They did, in so many words. After we had conferred at length without result, I said to them: 'Gentlemen, suppose that we were to propose an ideal system of representation for individual members—one which satisfied every possible objection—would you accept it?' And they said, 'Mr. Potter, we may say that we are instructed to consider no plan whatever of representation for individual members outside of clubs.' And when they admitted that, what more was there for us to say? We went to the committee meetings in good faith, only to find that we were meeting, not a committee, but instructed delegates whose will was not their own. What was the use of arguing when we knew in advance that no reasoning would avail?"

"From whom, do you take it, did their instructions come?"

"I suppose from the A. A. A. board of directors. Mr. Whipple himself said to me, in the presence of that board, 'It is with us a *sine qua non* that individual members shall not be represented by delegates.'"

"Did he use the words 'by delegates'?"

"Leave them out, if you wish. If the individual member joins a club he is no longer an individual member."

"Did you offer any suggestion as to ways of representing individual members as such, to meet their views?"

"We did not get at that. When we found that we were talking with delegates we put on our hats. It was time to go home. And what had the A. A. A. board of directors to do with the matter at all? Their committee was responsible to the special governing board of ten, and should have reported a disagreement to them. So far as I know, that special board never even met. It certainly never met our board."

"You did not, then, formally discuss a scheme of representation for individual members. But, of course, you had some plan in mind?"

"Well, our American Motor League plan is this: We divide each State by groups of counties into a certain number of districts. Delegates, resident in their several districts, are nominated by resident members, and ballots with their names, with blank lines below for 'scratch' voters, are sent to every member of the district. The delegates elected per district are in proportion to the

number of members, and they represent the district in the national assembly."

"The impression has prevailed that you favored a system of voting by proxy."

"We did not discuss it. How could we? The plan of the merger was being violated by the other side. We stood on our dignity and refused to deal with them."

"It is a little curious that after the officials of the A. A. A. had expressed themselves so cordially in favor of the merger they should have sent you a committee apparently instructed to block negotiations at the start."

"I would not say whether they intended to block negotiations, or expected that we would agree to their demands. Understand, I do not wish to say a word against the original committee which drew up with us the plan of merger. Mr. Farson and Mr. Scarritt are both very fine men, and we got on perfectly together. We did not always agree,—we disagreed on very many things; but we got together and reasoned them out. We had no suspicion that a hitch was impending till we met the instructed committee from the board of directors, and tried to draw up a constitution and by-laws."

"This latter committee would not accept your plan of voting by districts as meeting its idea of a club?"

"A district has no organization, no officers, no headquarters, no dues. Certainly it is not a club. Understand me, I believe in organization. I do not think one can help or hinder clubs much by artificial means, but I offered to argue to a discrimination between individual members and club members, in respect to representation. I even suggested that the former should be entitled to but one delegate per 100 members, against one delegate per 20 members belonging to clubs. But they wouldn't accept it. And that, too, in spite of the fact that our members would be paying, man for man, from two to four times as much in dues as theirs. 'Our dues, you know, are \$2 annually, against \$1 per individual in the A. A. A., and in New York State and Massachusetts half of that dollar goes back to the State Associations, under the terms of their affiliation.'"

In response to a final question, Mr. Potter declined to "show his hand" by disclosing the A. M. L. membership, but conceded readily that the league has no funds worth mentioning at present. "We shall get \$6,000 in renewals this fall, however," he said, "and shall at once begin an energetic campaign for new members. The present low state of our treasury is due only to the fact that pending these negotiations we have let the spring and early summer, the best recruiting season of the year, go by unimproved."

MECHANICALLY operated valves are quite extensively used in motorcycle engines in England and on the continent, and seem to be gaining ground.

HORSE PUNCTURED HIS TIRE.

Thought Pneumatic on Broadway Was a Brooklyn Rubber Plant.

Professional jealousy crept into the heart of a truck gardener's patient old horse yesterday afternoon in front of the Hotel Imperial, and he bit a piece out of the tire of a \$3,500 automobile, nearly getting his head blown off by the expansion of compressed air which accompanied the theft of the rubber tidbit.

The horse ran up Broadway, sprinkling enough carrots, beets and cabbages in the street to have routed all the actors off the boards, finally returning, of his own volition, to see Thomas Mulligan, owner of the auto car, and some of Mulligan's friends minutely examining the toothmarks in the tire.

The horse was owned by J. W. Fleming, a farmer who sells vegetables to several Broadway hotels. It is necessary to speak of the horse in the past tense, because he is likely to die of indigestion while this is going to press.

The animal had some words with the automobile and it is said the automobile spoke rather contemptuously. At any rate, blows were exchanged and then the horse resorted to mayhem.

Mr. Mulligan, who is a millionaire distiller of Philadelphia, with an office at 4 Christopher street, had gone into the Imperial with several friends.

When the horse bit the automobile the sudden escape of air almost lifted him off his feet. He was dazed, and instead of taking another bite, decided to show his mettle by challenging the automobile to a sprint up Broadway.

With a piece of rubber still between his teeth, like a football player, the animal ran madly up Broadway to Thirty-fourth street, then over to Fifth avenue, up to Forty-second street, across, and back down Broadway.

He was followed by Bicycle Policeman Debbs and a mounted roundsman, but neither could keep pace with him.

The most remarkable thing about it was that nobody except the automobile was injured. The horse wasn't angry at a soul on Broadway.

He slowed up and stopped in front of the Imperial, right where he was before. Farmer Fleming wouldn't have known anything about it but for the vegetables that were scattered along the route.—New York Telegraph.

THE Great Western Railway Company, in England, we learn from the Daily Consular Reports, has placed in service a number of motor omnibuses, which are used as feeders to the railway lines. The successful manner in which these have operated in carrying passengers and baggage has encouraged the company to use them for the distribution of the mails, a striking example of the advance made in the reliability of action of the modern motor vehicle.

The 1905 Winton Car.

In the new Winton car for 1905, which has just been brought out by the well-known Cleveland builders, previous Winton practice has been departed from along a line no doubt suggested by the *Bullet III*. The engine has four cylinders, but instead of being vertical it is horizontal, with all the cylinders on one side of the shaft. The familiar Winton aggregation of tank and radiator occupies the front of the car, and the motor lies under the footboard, with the inlet valve cages and hoods half projecting from below the right side frame member.

The speed-changing mechanism is still of the Winton individual clutch type, giving two forward speeds and a reverse; and propeller shaft transmission to the rear axle is used.

The side frame members, instead of being riveted up of plates and angle steel, are of channel-section pressed steel of varying depth, in accordance with the most modern practice. Near the middle the frame is 7 inches deep. There are three transverse members, one a tube 126 at the extreme rear, the second a tube 97 just back of the tank, the third a drop channel 48 at the front end of the radiator. At other points the motor and gear case, through wings bolting to the side members, lend the necessary support; and by this arrangement a false frame is avoided.

The motor cylinders are of 4 3/8 inches bore by 5 inches stroke. They are cast in pairs, with jackets and exhaust valve chambers integral, and separate inlet valve chambers bolted on and made tight with asbestos copper gaskets. The cam-shaft and exhaust valve mechanism, and most other moving parts as well, are enclosed, and are further protected from dirt by a pan beneath the motor. A pair of large hand plates give instant access to the interior of the crankcase through the footboard. The exhaust valve springs are reached by removing the plates 24 just below them; and the carbure-

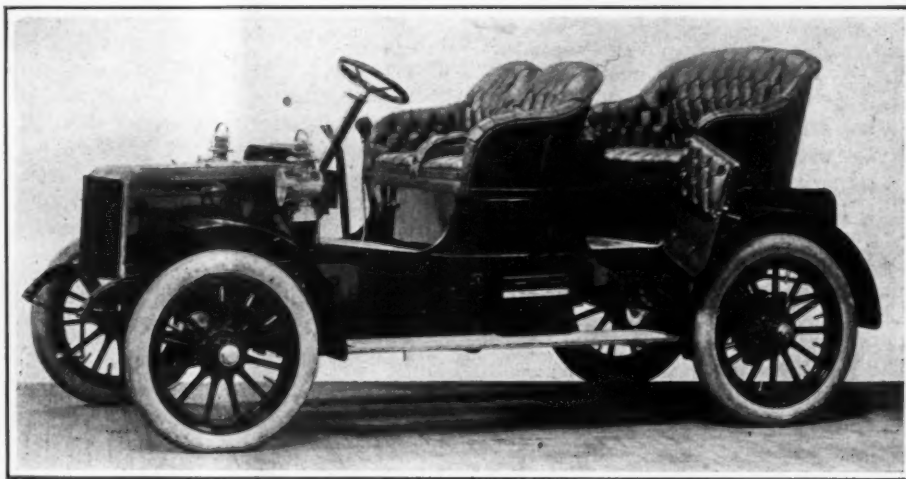
ter, spark plugs, and circuit breaker or timer 6 are made accessible in the same way. The crank shaft and pistons may be removed by detaching the upper half of the divided crank case.

The familiar Winton system of pneumatic control is retained. The air pump 2 is at the front end of the motor, with a miniature piston and connecting rod worked from a crank at the front end of the cam-shaft. The air passes through a receiver 3, and the branches, one arm of a tee leading to the air connection 88, where the light piston 18, cushioning against the air, determines the lift of the inlet valve. The other arm of the tee leads to the foot button valve through which the air escapes. Another connection permits the air escape to be regu-

it by pipe 125 and discharging finally to the rear.

Two views in section are given of the carbureter. The air enters partly through a fixed but adjustable opening in the top shutter 72 and draws down past the adjustable needle orifice and through the gauze mixing cones below. A diluting stream enters through a burlap filter and tube 73, traversing the holes in valve 74 before joining the main stream just below the needle valve. At high motor speeds valve 74 is opened more or less giving some passage around it, and this prevents too rich a mixture from being formed under such conditions.

The several clutches of the speed-changing mechanism consist each of a disc and a

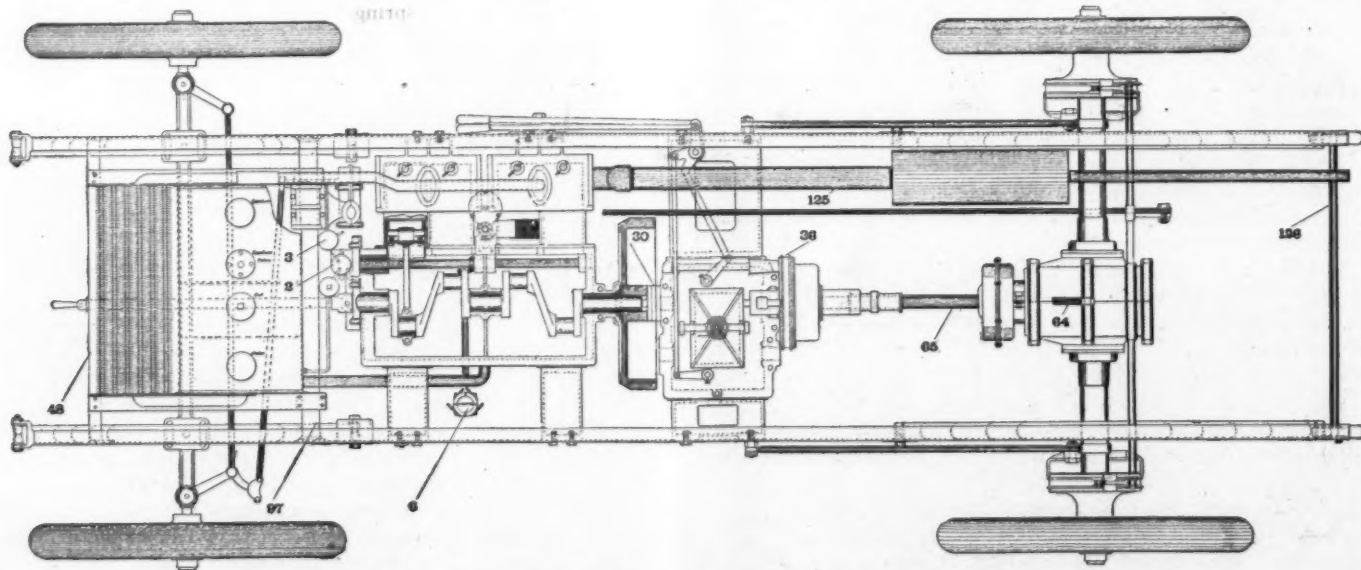


NEW WINTON CAR WITH FOUR-CYLINDER TRANSVERSE MOTOR IN FRONT.

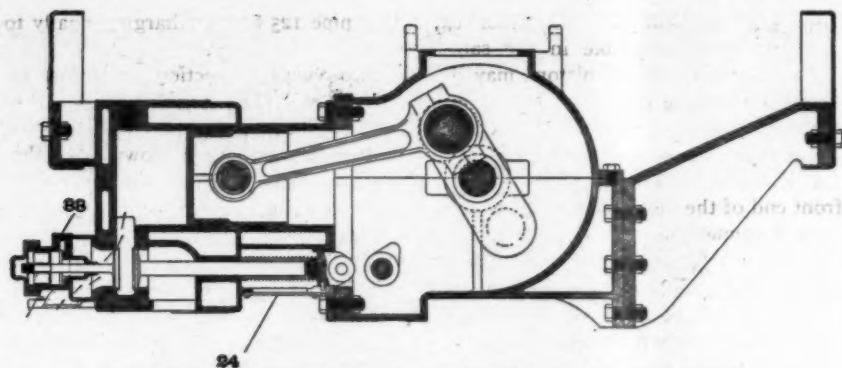
lated by a small lever on the steering column, just above the spark advance lever. This lever gives a fixed escape opening so long as it is left untouched, so that the foot button will presumably be used mainly for sudden "spurts."

The exhaust is muffled by a pair of expansion chambers, one directly below the exhaust chambers, the other connected with

cone, gripping corresponding bronze surfaces of a gear between them. On the high gear the drive is direct, no gears being at work, though all are in motion. For the high speed, three dogs 117, acting against disc 118, force the loose pins 35 against cone 34, and the latter, which is slightly loose on its key, into gear 32. Further motion of the thimble draws shaft 33 to the left (forward)



PLAN OF NEW WINTON TOURING CAR, SHOWING DISPOSITION OF QUADRUPE ENGINE UNDER FOOTBOARD.



VERTICAL LONGITUDINAL SECTION OF ONE OF THE CYLINDERS.

till the thin fibre disc seen between disc 119 and the shell 120 is gripped fast. Thus the end thrust is taken up between the dogs and disc 119.

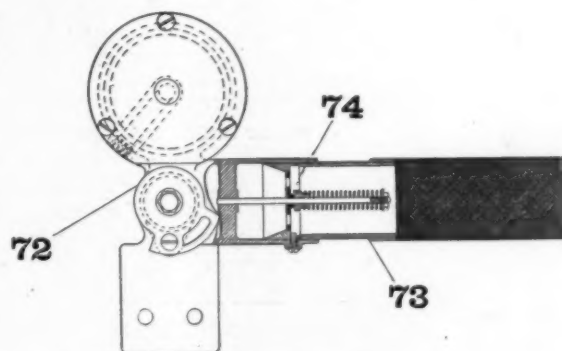
For the slow speed, dogs 121 are put in action, and the drive is through gears 40, 39, 42, and 32. An intermediate pinion between gears 44 and 45 gives the reverse. A slightly loose coupling 30 between the flywheel and shaft 33 allows for loss of alignment. A service brake band acts on the drum 36, attached to which is part of the front universal joint of the propeller shaft 65.

The bevel driving pinion in the rear axle runs in a plain bronze bushing. The differential is of the spur gear type, and the axle shafts run in ball-bearings with 1-inch balls. The axle is trussed below, and two struts, one (64) at the top of the case and the other below, are pivotally connected at their front ends to points on the speed gear box, thus relieving the springs of all stresses due to driving and braking.

The engine cylinders and shaft bearings are lubricated through sight feeds on the dash, the oil being put under air pressure by connection with the air pump through a reducing valve. The speed gear box is lu-

bricated by splash. By means of a cock opened from the seat, the crank-case may be drained. The oil in the latter is used but once, not circulated and used over and over.

For ignition one six-volt storage battery is used, and five dry cells, the latter being



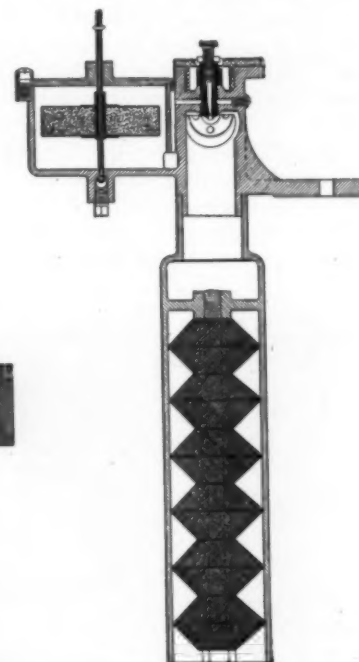
PART SECTIONAL VIEW OF CARBURETER.

held as a reserve. One vibrator coil is used for each cylinder.

A centrifugal circulating pump is used, gear driven and attached to the front of the crankcase. The course of circulation is

from the pump to the cylinders, to the bottom of the radiator, from the top of the latter to the tank, and from the tank through an auxiliary radiator, beneath the tank, to the pump again. The oil is separated by a partition from the water in a common tank, and the gasoline in another division of the tank has a heat insulating space between it and the water.

The control system follows previous Winton practice, one lever operating the high speed and the emergency brake, and another the low speed and reverse. The other items have been mentioned. The worm



VERTICAL SECTION OF CARBURETER.

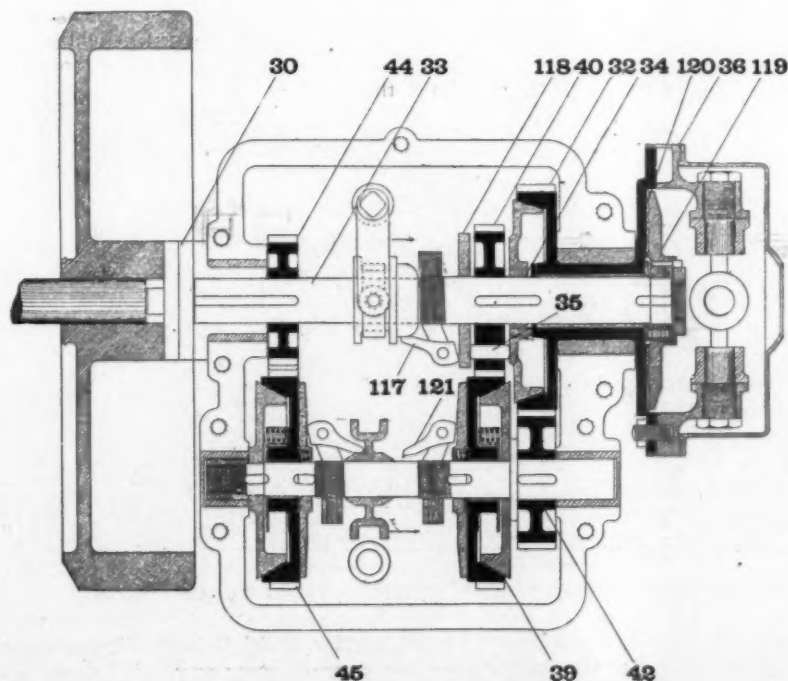
steering gear has provision for taking up wear.

The wheels have 32 by 4-inch tires in front, and 34 by 4 1-2-inch tires in the rear. The emergency brakes act on the rear wheel hubs. Wheel base is 104 inches, and the springs are 38 and 44 inches long, respectively.

The body is a new type of side entrance tonneau, with cast aluminum frame and laminated wood seats. Under the tonneau seats is a tool locker, reached from behind. The mud guards are laminated wood, and the upholstery is deep and luxurious.

White 1905 Touring Car.

Owing to the fact that it disposed of all of its 1904 cars before the end of June, the White Sewing Machine Co. has made a very early announcement of its model for next year, which will be called the Model E. This car, on which shipments will begin about September 1, is considerably larger than its predecessor, as the photographs show, having a longer wheel base, roomier and more graceful tonneau—King of the Belgians type—and considerably greater



MODIFIED INDIVIDUAL CLUTCH CHANGE SPEED GEARING.

steaming capacity. The same engine is used as before, but the generator is enlarged about 50 per cent. The springs are now 40 and 44 inches long in front and rear, respectively, and the rear springs are attached to shackles at both ends instead of at the front end only, distance rods being added to preserve the axle adjustment. The rear wheels are 34 inches in diameter, with 4-inch tires, and the front wheels are 32 by 3 1-2 inches. With a 92-inch wheel base, the car rides with exceptional ease and smoothness even at high speed.

In the power plant all the essential features of the White system are retained, but a notable improvement has been added in the shape of a low gear for hill-climbing, a feature the absence of which from most steam touring cars has been somewhat remarkable, considering the economy in steam to be gained by being able on hills, as well as elsewhere, to work the engine on a short cut-off. Besides removing the necessity for "simpling" the engine for a stiff grade, this feature has in the White car another ad-



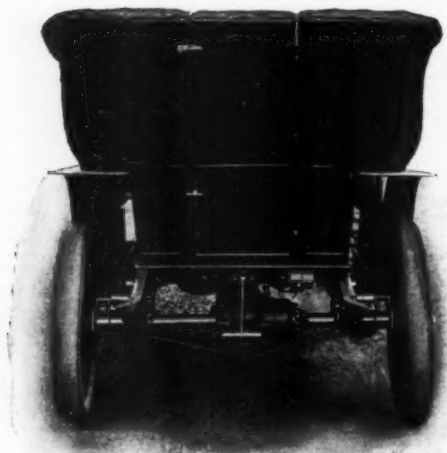
WHITE MODEL E STEAM CAR, FITTED WITH CHANGE SPEED GEAR.

of gasoline and water, and the mileage on one filling is given as 150. The weight of the car is about 2,000 pounds, and it is rated at 15-horsepower.

OMAHA LICENSES NON-TRANSFERABLE

It is given as the opinion of the city attorney of Omaha that the automobile license or permit issued in accordance with the automobile ordinance in force there is in the nature of a personal permit and is not transferable, that is, that a person who owns a

car and takes out a license in his own name to operate it may not legally allow another who is unlicensed to run the machine. If a person owns or operates for his own use or for hire more than one car he must have a permit for each person operating such machines. Dealers and manufacturers may transfer the license number from one machine to another that they are operating to exhibit or demonstrate for sale, but if they desire to demonstrate more than one at a time they must have a permit and number for each car they use.



REAR VIEW OF WHITE CAR.

vantage, in that it produces a proportional increase in the water supply, since the water pump is directly connected to the engine and runs only as fast as the latter. This renders it unnecessary to resort to the hand pump for long hills, a point to which more or less objection has heretofore been made.

The hill-climbing speed is obtained by a pair of sliding gears enclosed in a casing on the rear axle. Between the two speed positions is a neutral point, and this is in itself useful in several ways. It enables the operator to warm up the engine before starting by running it light, so that conditions may be right for speed as soon as he leaves the garage. In case of lack of water in the generator, a supply can be pumped up by power while the car is standing, since even a very small pressure will turn the engine over. In addition, the car is more readily moved about the garage by hand when the gears are out.

The tank capacity will be 15 gallons each



NEW CADILLAC SURREY, FITTED TO MODEL B CHASSIS.

The new Cadillac surrey differs from the regular model B in that it has a surrey body instead of a tonneau, the chassis being the same in every way. A feature of the surrey that will be appreciated by those who delight in touring is the ample stowage space under the rear seat.

Driving Eastward on the National Road.*

"Pathfinders" Returning East Over Southern Route Rejoice in Good Road After Traversing Illinois "Bottoms."

Special Correspondence.

TERRE HAUTE, July 10.—Last Wednesday evening the sights and sounds of St. Louis were left behind and we headed eastward across Illinois. Leaving the exposition city by way of Washington avenue, we crossed the Mississippi on the viaduct to East St. Louis, and, in spite of a heavy shower, made Collinsville that night. Thursday we ran from Collinsville to Vandalia, Friday we made Greenup, and Saturday we pulled into Terre Haute, Ind., where we spent Sunday at the Terre Haute House, designated as the stopping place on the night of August 8 for the A. A. A. touring division from Baltimore and Philadelphia.

On our run down to St. Louis from Chicago we thought we had sounded the depths of Illinois mud, but the mud between St. Louis and Terre Haute is just as black and just as sticky as, and, if possible, deeper

road. Tackle and ropes were brought out once more and with the aid of a telegraph pole—that homely but companionable and useful friend of the tourist—we eventually hauled our car to solid ground.

FORDING THE LITTLE WABASH.

We forded our first river at Effingham, and it is sincerely hoped that it will be the last. As usual, we rushed it, and to that fact alone is due our successful arrival on the opposite bank, for the water came up to the body and the battery was short-circuited in no time. Momentum carried the *Pathfinder* through, however, and we just made the opposite bank. Then the flooring had to be torn up and the battery dried out—an operation that required the greater part of two hours, when a thunder storm overtook us and added a final wetting to the

single car—a runabout or tonneau—but often it is a detachment of from two to five touring cars all loaded with tourists and their baggage and all bound for the big fair. Were the big St. Louis tour to be postponed another month it is doubtful if there would be any auto enthusiasts in the West or Middle West who had not already made the trip, judging by the parties we meet daily.

ON THE NATIONAL HIGHWAY.

Soon after leaving Collinsville we got on to the National Highway and the thought occurred: What an excellent automobile roadway from the East this would make, and how cheaply it could be repaired and put into excellent condition. This highway was constructed by the government in 1840 to aid in the settlement of the West before the railroads were built. The roadbed is about sixty feet wide, and at the time it was constructed this must have been an ideal road. Since the introduction of the railroad no attempt has been made by the government to keep up the National Highway.

If the representatives of the States



CHARACTERISTIC ROAD SCENE IN SOUTHERN ILLINOIS AFTER A HEAVY RAIN—BOTTOMLESS BLACK MUD AND STANDING WATER.

than any we had seen. It is very unusual for deep mud to be encountered in Illinois at this time of the year, say the old inhabitants, but there is more than sufficient of it now.

NAVIGATING ILLINOIS "BOTTOMS."

In the west swampy low lands are designated as "bottoms," and it was a constant succession of bottoms that we ran through between Collinsville and Greenup. The first one we approached we tried to rush as we had rushed many a mire and mudhole on the trip from New York to St. Louis. We struck it fair and square in the middle at about a twenty-five-mile clip. Then the mud struck us. It came up on both sides and over the front, first in streams, then in waves, until the body of the car and the leather suits of the occupants were covered with it. Then the car stopped, right in the middle and deepest part of as fine a frog pond as ever grew in the center of an Illinois

car and passengers. The river was the Little Wabash; the bridge was down, and the usually shallow ford was made deep by continual rains.

AN INTERRUPTED BAPTISM.

An amusing incident occurred just before the city of Terre Haute was reached. A Baptist pastor was holding baptism services in the river beneath a bridge we were obliged to cross. As the congregation, many of whom were in the water awaiting their turn to be immersed, caught sight of the automobile flying down the road, all thoughts of salvation were forgotten in the concern for the horses tied on the opposite side of the river. In less time than it takes to tell, the assembly—converts, sinners and all—had deserted the river and were running across the bridge to get at their horses' heads before the automobile came along.

Ever since leaving St. Louis we have been passing parties of automobilists bound for the exposition. Sometimes it is only a

through which this old turnpike passes would get together at Washington and pass a bill providing for the repair of this roadway by the government, it could easily be reconstructed into a pike sixty feet wide, extending the entire 1,100 miles from Philadelphia to St. Louis, making not only the finest roadway in America, but one of the longest good roads in the world. What a boon it would be to automobilists. This is not a dream; it could be realized if the automobilists of the States traversed would take enough interest in the matter to write their representatives at Washington urging such action.

PERCY F. MEGARGEL.

AN AUTOMOBILE fire engine has been constructed for the private use of Baron Alfred de Rothschild and is installed at Tring Park, his country home in Buckinghamshire, England. The machine can pump 500 gallons of water a minute and will carry eight men and supplies at a speed of thirty miles an hour. It cost \$5,000.

*Continued from page 38, issue of July 9, 1904.—On the Road to St. Louis.

Correspondence

A Little Tour in New England.

Editor THE AUTOMOBILE:

Sir.—Having just completed a little trip in New England under rather difficult conditions, I thought that perhaps a brief account might be of interest to those who contemplate tours in this section. Although I have covered many thousands of miles in my car, through every New England State, and a few outside of that territory, I never dreamt of encountering such roads in my own section of the country as I met in the four-day trip, during which time nearly 600 miles were covered without any attempt at speed.

It had been raining almost daily for two weeks previous, and was extremely cloudy and dismal the day I planned to go. Getting away at 8 o'clock Wednesday morning from Boston, Mass., I went to Worcester in two hours and there called on several automobile friends in the trade, getting away at 11 o'clock and stopping next at the Converse hotel in Palmer for lunch. The proprietor, seeing my car fitted out in touring form, asked if he could accompany me to Springfield, and, of course, he was a welcome passenger.

I had been following a thunder storm for some time during the morning, and when our start was made it was sprinkling, and before we had covered ten miles the rain came down in perfect torrents.

An hour's stop was made in a farmer's barn while the storm was at its height, and then the trip was resumed to Springfield, 100 miles away from the starting point, reaching there in five hours' running time from Boston. I passed the rest of the day with friends in the trade and started early next morning in a rain storm for Pittsfield, 50 miles away.

On reaching Westfield it was raining a little harder than what one cared to be out in with an open car, and I remained over for about two hours.

At Huntington I jumped out at the only hotel to inquire again regarding the roads, and learned that there were three ways of reaching Pittsfield, by going over the Berkshire Mountains. Opinion of choice was divided, so I took the center route, which was through Littleville, Dayville, North Worthington, Peru and Hinsdale.

A crowd in the small town of Huntington soon collected about my car. Some advised me not to continue until the weather cleared, as the roads were practically impassable beyond, they said, and the newspapers reported railroad bridges swept away. I wanted to reach Pittsfield that day, so made a start, while the spectators threw all sorts of questions at me, such as "When do you expect to get there? Got your nerve?" and the like.

A short distance out of Huntington I began to realize that I had been travelling

on good roads, for here I struck streams of water covering the roads about over the tops of my wheels, with mud up to the hubs. For about twenty miles it was almost continually up grade from a 3 to 25 per cent. rise, the top of the grade being the highest inhabited point in Massachusetts. Along the way farmers had been repairing and improving (?) the roads, although they were not working that day on account of the storm. This I appreciated because the roads were so narrow that it would have been difficult to pass a team in some places. Indeed, the road was only a ploughed piece of ground across a field.

Going up over the Peru Mountains I struck extremely sharp pitches, and in these places sod, peat or sawdust had been used in road dressing. In each case, near by was a farmer's house, and on his grounds was a team, all harnessed, waiting for the opportunity to give me assistance, in consideration of a two or three dollar fee. I was advised early in my tour by an automobilist that I would encounter this experience, and he added that one of these farmers had more than paid for his place by the fees he had received from automobile drivers.

But I fooled them. Having three new blankets, I took these out of the car and placed them under the rear wheels. In this way they got traction and I passed over the bad spots. Along level stretches I met some of these mud holes, and by tying rope around my rear wheels, then starting ahead and reversing in my own tracks and starting ahead again, gained a few feet at a time and passed through without assistance.

Pittsfield was reached in the middle of the afternoon, and as it was still raining I decided to remain at the auto station over night. Friday was a clear day, so I covered about 75 miles, giving demonstrations around the Berkshires. Saturday morning I decided to leave for Meriden, Conn., about 8 a. m.

The roads to Springfield had commenced to dry up, and, as the return trip was mostly down grade, although over rough roads, I covered the distance in a little more than three hours.

Leaving there at 3 o'clock I reached Hartford, 26 miles, at 4.15 p. m. Here I met some friends and took them to Meriden in an hour, so that again I covered 100 miles in about five hours' running time. Here I remained over night at Dr. Harold A. Meek's house, which has a garage attached. He is an automobile enthusiast, from the word go, and a friend of Connecticut's Governor, whom he has also interested in the sport.

Sunday I started at 6 o'clock for Boston, reaching there at 4 p. m. On the way I made an hour's stop in Springfield to give demonstrations and rested an hour in Worcester for luncheon.

That night in Boston I covered 60 miles about town, and during the entire trip not a single adjustment or repair of any kind had to be made. In fact, I have run this

Thomas triple-cylinder car since February, some 8,000 miles, without its being laid up five minutes for repairs. I attribute this remarkable record to the fact that I ran my car personally at all times, always keeping it properly adjusted and above all well oiled.

A French car which was run over the road from Pittsfield the day after I returned experienced considerable trouble by the fly wheel striking, and the exhaust pipe was knocked off entirely, going to prove that cars must be specially built for American roads.

CHAS. S. HENSHAW.

Boston, Mass.

Porto Rico Auto Passenger Service.

Editor THE AUTOMOBILE:

Sir:—We have now been operating our automobile stage line in Porto Rico for seven weeks and in that time have missed connections with the train for San Juan just once, which we think is a pretty good record for a start.

The railroad is built from San Juan to Camuy, a distance of sixty miles, and then at Aguadilla, twenty-seven miles east, it starts again and is continued for 100 miles around to Ponce. The completion of the railroad over the intervening space of twenty-seven miles is impractical because the country is very rough and hilly and the traffic would not justify the outlay. Heretofore, through passengers have been taken from one terminal to another in rickety old coaches drawn by miserable little horses hardly larger than "jackrabbits." We thought this offered a good opening for automobile service and, though our troubles have been many, we are satisfied that our venture is going to be a great success.

Already a Spanish company has been organized and a man sent to "the States" to buy machines to compete with ours, so before long there will be a continuous endurance contest going on in Porto Rico.

We are using three 8-horsepower, air-cooled Knox machines, fitted with wagonette bodies and Springfield tops and geared down to seventeen miles an hour. We made a great mistake in using solid tires instead of pneumatic. To the terrific vibration caused by the solid tires we attribute all of our breaks in the machinery and we have now ordered a full equipment of Tennant tires. Whether they will solve the problem or not remains to be seen.

This twenty-seven mile stretch of road was to have been macadamized by May 1, but when we arrived we found there remained about ten miles unfinished. Since May 1 about six miles have been completed and we still have four miles of sand, rocks, ruts, ditches and everything that goes to make a road bad. Another month, however, will see the end and we shall then have twenty-seven miles of Central Park, except that there are some fearful hills. One hill, one mile in length, has an average grade of 15 per cent.—not an auto-



OUR COMPETITOR FOR PASSENGER BUSINESS.



PORTO RICAN FREIGHTING METHOD.



THE NATIVES LEND A HAND.

mobile salesman's 15 per cent., but an actual grade. If you will stretch the Lexington Avenue hill at 102nd street out for a mile and give it a few curves, you will have some idea of this grade. Every day we take from three to eight passengers and from 100 to 500 pounds of baggage up this hill on one machine.

We meet the train from San Juan when it arrives in Camuy and take the passengers and baggage through to Aguadilla. By the time we reach Aguadilla, the train from the south is in and we return with the northbound passengers, consuming just four and a half hours for the round trip.

Our service began on the first day of May. It was a hot, dusty morning when the train arrived at the little station in Camuy, with seven passengers and four trunks to go to Aguadilla. We loaded them into one machine and I took the wheel and started on our first trip. The barking of dogs, the cheering of the natives and the hiss of the little French engine blowing off steam made it sound like a diminutive Fourth of July.

For the first two miles the road was good and I "let her out," if you can call seventeen miles an hour "letting her out." It was record-breaking speed for the passengers and to see the "ji bara" take to the woods was great fun. Then the bad roads began—deep washes and boulders as big as a man's head covered the way and it meant very slow, careful driving.

The little towns of Quebradillas and Isa-

bella, through which we passed, turned out in full force to see us go through. We reached Aguadilla without a stop in two hours and fifteen minutes. By some mistake all the northbound passengers had been informed that the automobiles would not start running until the next day, so the wagonette went back empty.

Since that day we have had one machine and sometimes two making the trip daily, but on the third day's run our troubles began and for three weeks we had nothing else. As I was driving slowly over the worst stretch of road that day the engine stopped. Examination showed that the arm which holds the cylinder to the frame had snapped off short. There we were, stranded eighteen miles from destination with three passengers who had to take the boat for the United States the next day. At once I hired a coach to take them to Camuy and telegraphed the railroad company for an engine to carry them on to San Juan. The engine was sent and the passengers made their boat.

Mr. Hodges, being informed of my plight, came out from Camuy, bringing another cylinder. The disabled machine was hauled to Isabella, when we worked from 6 o'clock until 2 the next morning, putting in the new cylinder, and then started for Camuy. Imagine our feelings when, a few miles out of Isabella, the second cylinder broke in exactly the same place. This time we towed the machine into Camuy, arriving at daylight. After breakfast we looked over the

sound machine and, finding it all right, were ready when the train came in.

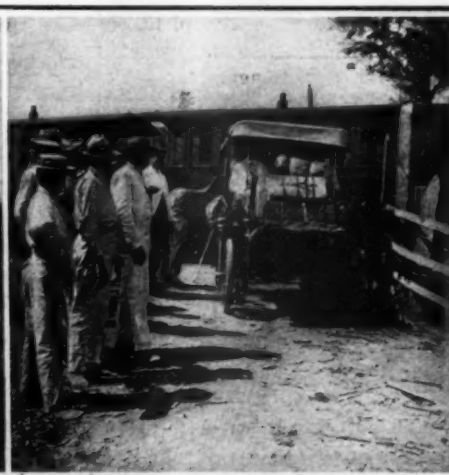
I made the run this day and had no trouble except to keep awake, but we had used our only extra cylinder and had one machine out of business entirely.

The coach drivers, "standing in" with the road builders, now commenced to put obstacles in our way, and in several places the road was blocked so that we had to drive through the fields or, if it was wet, be pulled through with a yoke of oxen to the next place where the road was passable. The oxdrivers also undertook to block the way and often refused to give us room to pass. That annoyance is over now, however, as Mr. Hodges (one of our drivers) is of a belligerent disposition and after he had gently but firmly thrashed a few of them, the drivers gave us all the room we wanted. The second week of our service there was some kind of a break nearly every day and all were traceable to the vibration. A truss rod broke one day and the back axle the next. But in every case we were able to bolster up the breaks and always got in on time for the train.

On one trip Mr. Hodges was running along all right on the good part of the road, when he and a passenger beside him were thrown over the baggage in front. Fortunately, they were not hurt and investigation showed that the trouble was only a broken spindle in the front wheel. It bent the front axle, the front mud fender, a lamp and the arm that holds the steering check



TREE-FERNS NEAR ISABELLA.



LEAVING CAMUY RAILROAD TERMINUS.



BREAKING STONE FOR MACADAM ROAD.

to the axle. In twenty minutes another spindle was in place and the machine on the road again. Camuy was reached in time for the train, but with a load of passengers who said "Never again an automobile for us."

We had feared this sort of a break from the first, as the vibration caused by running at good speed over bad roads with solid tires must tend to crystallize the metal in the spindle. There has been no trouble whatever with the working of the engines. With pneumatic tires, I think we should not have had a single break, but pneumatic tires are too expensive and uncertain for our work and we are waiting patiently for the man whose tire will solve the problem.

Our machines have not been in operation long enough to give any statistics on the wear of parts. The one most used registers 2,330 miles, and on this there is no play in any bearing and no part worn to any extent except the tires, and they are down to within an inch of the rim. We average burning out a brake-band every week, as the heavy loads and long steep hills make it necessary to use the brakes half the time; but the leather to cover them again costs but a few cents.

When it is remembered that the Spanish countries in South America have many miles of good roads and but few miles of railroad, this experimenting will be of value to manufacturers who are building cars for practical, commercial service rather than pleasure. For this work it is necessary to have cars that will run day in and day out without a break, as repair shops are many miles apart.

C. H. MARTIN.

Camuy, Porto Rico.

Automobile Drives a Shop.

Editor THE AUTOMOBILE:

Sir—On a recent afternoon, a lightning storm burned out the motor running the machinery in the shop of a local garage. As they were very busy at the time something

was done, as will be seen by the accompanying photograph, and has given good satisfaction. The car used was a Rambler runabout, and furnishes all the power needed in the shop until the repairs can be made to the damaged motor.

W. N. G. C.

Asbury Park, N. J.

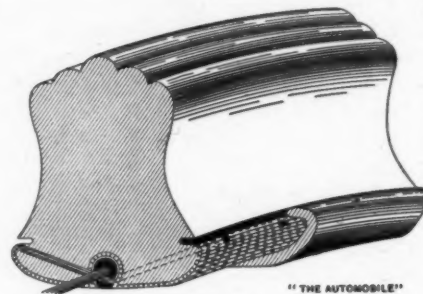
Swinehart Solid Tire.

A representative of this publication had an opportunity recently to inspect closely the Swinehart "solid clincher" automobile tires, and found matter of interest both in their performance, as shown by a trial spin, and in the very ingenious means by which they may be attached to the standard pattern clincher rim. The general form of the tire, as shown by the illustration, is already familiar. Its special feature, by reason of which the makers claim that it is adapted not only to delivery wagons and electrics, but also to steam and gasoline pleasure vehicles of moderate speeds, is the unusual depth of section, which is combined with a slightly broadened tread to give durability. Owing to these features, coupled with the use of an elastic grade of rubber, the compressibility of the tire is much greater than that of the ordinary solid tire.

The mode of attachment is both simple and exceptionally rigid, and dispenses altogether with the customary circular tie wires. It depends primarily on the use of numerous short stiff cross-wires, each extending from the upper surface of the "clinch" or bead to the further side of a central groove in the base of the tire. The wires are spaced about an inch apart, and are "staggered" with respect to the right and left sides of the tire. A strip of canvas lines the base of the tire and the inside of the groove, and the wires, abutting against the sides of the groove, are prevented thereby from working away from the edge of the clinch. Creeping is pre-

quired to get it into the rim. The process of doing this is as follows:

First the tire itself is warmed, and the fabric painted with hot cement. Meanwhile the wheel itself, detached from the axle, is mounted on a horizontal stud in a frame and spun, while a torch is applied to the rim till the latter is hot. Cement is applied, and the warm tire stretched over the rim with one clinch in place. To get the other under the edge of the rim, the wheel and tire are gripped in the frame, and by means of a lever with a projecting notch the end of each wire in turn is caught and forced sidewise—i.e., along the length of the tire,



SOLID TIRE ATTACHED TO RIM.

—the surrounding rubber yielding with it, till the wire is sufficiently askew to go under the edge of the rim. With a long leverage this is quickly accomplished, and the pins are rapidly forced into place before the rim cools. The central groove becomes filled with cement, which on hardening prevents the inner ends of the wires from slipping past the edges of the groove.

The tire is removed by putting the wheel bodily into an oven and heating it till the cement melts, or by making use of the iron wire which runs centrally through the cement-filled groove. The ends of this wire are brought out through the disused valve stem hole, now filled by a $\frac{1}{8}$ -inch gas pipe plug which covers the ends of the wires. By taking out the plug and connecting the ends of the wire to a source of electric current, the wire is made to heat and melt the cement around it. When the cement is hot, the process of detachment is practically the reverse of attaching the tire.

The conclusion reached in the trial trip already referred to was that, although the Swinehart tire falls considerably short of the resiliency of pneumatics, it adds very measurably to the field of usefulness of the solid tire. So far as the passengers are concerned, there is not much to choose between it and pneumatics at moderate speeds and on fairly good roads, since the springs absorb most of the jar; but whether a live rear axle would long endure the jar would depend a good deal on its construction. With the side chain drive there should be little difficulty in getting good results, and the tires should be successful also on the front wheels unless possibly in motor-front cars, some parts of whose mechanism might suffer. Among business vehicles the tire should be most successful.



RUNNING MACHINERY IN A GARAGE TEMPORARILY WITH AN AUTOMOBILE.

had to be done and done quickly. After much discussion, some one suggested the experiment of attaching the main pulley belt to the flywheel of an automobile, which

vented and the canvas protected from rotting by cementing the tire solidly to the rim with gutta percha cement. As the base of the tire is quite stiff, some force is re-

HINTS ON OPERATING A RUNABOUT

AN automobile is like any other machine in many respects, and should be treated accordingly. It should be used with due regard to the work for which the manufacturers designed and built it. A light runabout is not a touring car and is not, properly speaking, a four-passenger vehicle. There is no doubt that the light car will stand up under a good deal of touring, with proper care, but the wear and tear on the machinery is bound to be greater than when the car is used under normal conditions, and it should not occasion surprise if more than usual attention and more frequent renewals are required. Then there is the extra passenger question. Almost any runabout can be fitted with an extra seat for the accommodation of two passengers more than the normal capacity of the machine, and no trouble will be experienced on smooth roads; but on rough or hilly roads the matter assumes a different aspect. The same springs cannot be made to carry four passengers with the comfort and safety with which they will carry two. If they are built for four, they will not be entirely comfortable for two, and vice versa; for the overloaded springs will leave most of the work of absorbing shocks to the tires, and a rough passage may be expected. With a heavy car of the touring type it will, of course, be different, as the proportionate weight of the passengers is less and the springs are larger and have a greater range of movement. So if you want to take out a couple of extra passengers in your light runabout, stick to smooth and level roads, and do not overwork your engine or expect the car to do work for which it is not adapted. If much touring is to be done, or if it is desired to carry more than two passengers most of the time, a heavier type of vehicle should be used.

* * *

One of the laughable performances sometimes seen when a novice is handling a car is the attempt to speed up the car by pressing down the accelerator with one foot while the other is firmly holding down the brake. This is not such an uncommon occurrence as one might imagine; only it does not usually come to light, and persons who do such things are not, as a rule, the most anxious to talk about them. This is one of the things that may very well be left undone.

* * *

When you have become somewhat expert in the running of your car it will be found advantageous to gradually cut down the gasoline feed until you find the point at which the motor runs well, but will not stand a further reduction. The smaller the proportion of gasoline the more economically the motor will run and the cleaner it will keep. This can, of course, be carried to extremes and the efficiency of the en-

gine interfered with; but the proper feed can be determined without great difficulty. The same process should be applied also to the cylinder lubrication. When the gasoline and lubricating oil are feeding into the cylinder in the smallest quantities that will produce good results, the motor should run for a long time without fouling the spark plug and on the minimum amount of fuel.

* * *

The practice of doing everything possible to avoid frightening horses and causing annoyance to horse drivers is one that should be encouraged. The automobile is still in the minority on the road, and though it certainly has equal rights with other users of the highway, and the automobilist should not permit himself to be imposed upon, still it is the best policy to make as many friends as possible for the good of automobiling generally. The old saw concerning prevention and cure is exceedingly applicable to meetings between horses and automobiles. If you are a frequent traveller over the same roads you will soon see the result of your good work in this direction. One thing that should be avoided as much as possible is the continuous use of the horn. Use it when necessary, but do not be lavish in your solos, for it is a species of music that few are capable of appreciating.

* * *

If the porcelain breaks in the spark plug, or if a valve breaks, note very carefully whether any of the pieces have got into the cylinder. If so they should be removed before attempting to run the motor, as it does not take a piece of steel or a few chips of hard porcelain a very long time to so cut a cylinder that it must be renewed. As a rule, cylinder walls are not of sufficient thickness to permit reboring if it is necessary to take off more than the merest suspicion of a cut, and a few chips caught by the piston can make pretty deep grooves the entire length of the stroke.

* * *

A rather curious incident that occurred a short time ago well illustrates what effects may be produced by the constant vibration of an automobile, like the constant dropping of water on a rock. The owner of a runabout was making a new joint at the coupling of a gasoline pipe, and after finishing the job and screwing everything up tight found that he had left a small brass nut loose on the pipe, which had a single turn in it to prevent breakage by vibration. Thinking it would do no harm, and that it was not worth while to break the joint and remove it, he left it on the pipe and speedily forgot all about it. A few months later he sold the machine with the nut still where he had left it. The new owner ran the car for about a month, when a leak developed in the gasoline pipe, and it was found, upon

investigation, that the nut had worn a hole right through the brass tube, necessitating the purchase of a new one.

* * *

A metal pipe, if broken off, can be temporarily repaired by connecting the broken ends with rubber tubing or hose of the right size and binding the ends tightly with wire or twine. A mere leak may be stopped with tape, if small, or with a piece of patching rubber held down by tape, if larger. In making use of rubber cement, patching rubber, tire tape, rubber tubing or anything made of or containing rubber in any form, bear in mind that rubber is soluble in gasoline and will not hold it long.

* * *

If you have an inspection pit in your auto house, be very careful that it does not get filled with gasoline vapor, which will, if given an opportunity, accumulate in the pit and only a touch of flame or spark will cause an explosion that may do a great deal of damage. The vapor also has a very unpleasant physical effect upon any one who breathes it, causing dizziness and headache difficult to get rid of. An accumulation of vapor may be caused by drippings from the car, or gasoline spilled while filling the tank.

* * *

If battery cells are not secured against jumping around in the battery box there is a strong possibility of their short-circuiting, either momentarily or continuously. This may or may not affect the sparking of the motor at once, but will shorten the life of the battery. Keep the cells well packed or in some way secured against movement.

* * *

Dry batteries and induction coils should be kept as far as possible from heat. The cement used in sealing the dry batteries melts rather easily and if this is permitted mysterious troubles may result. In the case of the induction coil, the paraffin wax frequently used for insulation is very apt to melt and run out, and will not only leave the coil in bad shape, but will, if it gets on the vibrator or on any of the contact surfaces, interrupt the flow of electricity and so stop the motor.

* * *

A good way to make a guide for setting the sparking points of a plug is to insert the blade of your knife between properly set points, mark the place on the blade and use this as a gauge. This is usually more convenient than carrying a separate gauge, which may easily be lost or misplaced, while your knife is pretty sure to be at hand when wanted.

* * *

A rubber connecting pipe may be repaired, if leaking or burst, with a tire patch well bound with tape.

Patents

Compound Gas Engine.

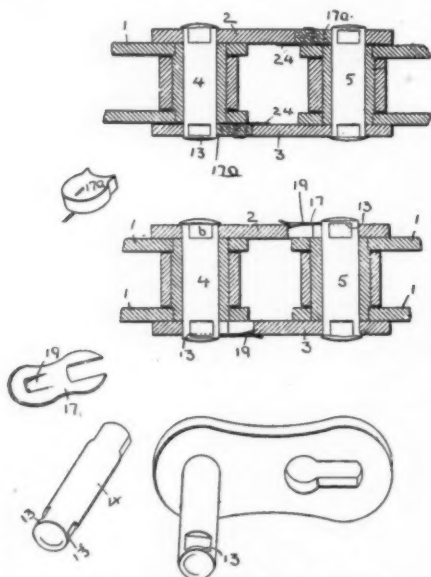
No. 762,421.—A. Leingartner, of Milwaukee, Wis.

A compound gas engine of the type frequently proposed, having one vertical low pressure cylinder between two high pressure cylinders, the two latter exhausting alternately into the former. The especial feature of this engine is an arrangement of valves, the inlet and transfer valves on one side and the exhaust valves on the other, by which, through the simultaneous endwise shifting of the two cam shafts, the engine is converted from compound to simple acting.

Detachable Link Sprocket Chain.

No. 762,045 and 762,046.—W. H. Gates, of Worcester, Mass.

Chains with slotted side links 2 3 and means for preventing the escape of pins



GATES DETACHABLE LINK CHAIN.

4 5 from the side links when assembled. In No. 762,045 this means consists of a flexible pad 17a of leather or felt, held in place by a bit of bent wire 24. In No. 762,046 a stamped sheet metal guard 17 is used, which is slipped under the lips 13 of the pins and held in place by the tongue 19. The pins and links have the same form in both devices, one end only of each pin being lipped, and the other riveted.

Battery Plate.

No. 763,322.—H. C. Porter, of Waukegan, Ill.

The grid is a lead casting having two continuous faces connected by narrow bridges B B at intervals. The active material is introduced either in a pasty condition or in the form of tablets, as seen in the detail at the left, and the sides of the plate are then perforated, the edges being forced into the active material.

Oil Can.

No. 762,300.—W. M. Fulton, of Knoxville, Tenn.

An oil can having a portion at the bottom or elsewhere formed with corrugated sides 3, and protected by the walls of the



FULTON OIL CAN.

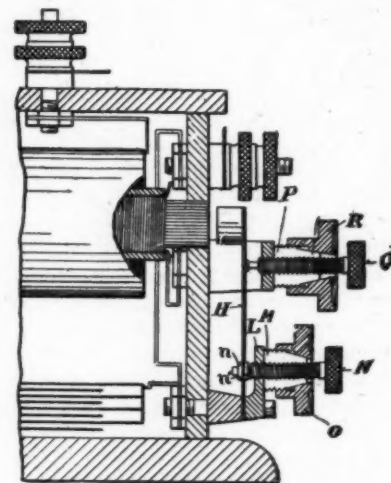
can and by the loose bottom 15, to which a stop 14 may be added. Thus pressure enough may be applied to the oil to feed it even if very stiff.

Lock-Nut for Spark Coil Vibrator.

No. 762,993.—C. H. Fischer, of Cincinnati, O.

In the drawing H represents the vibrator spring, whose tension is adjusted by the screw N at whose end are two collars n n' by which the spring is advanced or retracted with a screw. This screw is locked by a nut O, which screws over a projecting sleeve M formed integrally with the mounting L and split or slotted so that its tapered end is squeezed together on the screw by the nut O. The contact screw Q is locked in the same way by the nut R tightening up or squeezing together the ends of the sleeve P.

to the combustion chamber. The piston rod 4 bears on a false bottom 5 instead of on the plunger head 7, to protect the fuel from the heat of the latter. Fuel is drawn in through ball check 27 and pumped to the vaporizer through check 29. In a general way the lift of the plunger and therefore the amount of fuel—which apparently is intended to be kerosene or distillate—is proportional to the force of the explosion. To differentiate between a weak explosion due to too little and one due to too much fuel, advantage is taken of the fact that the combustion in the former case is much more rapid, the explosion pressure being high, but falling off rapidly by cooling before the piston has time to expand the change. Instead of allowing the plunger to go up freely, opposed only by the spring 17, like an indicator piston, it is made to accelerate a swinging weight 34 connected to shaft 14. This causes the movement of the plunger under the impulse due to a lean mixture to be less abrupt and more prolonged. It is claimed by the inventor that this device



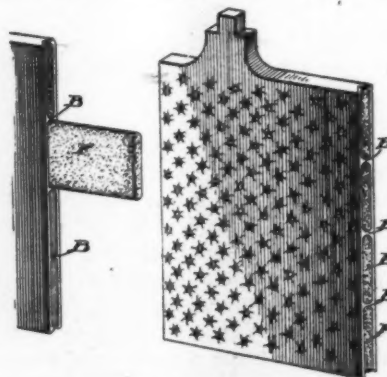
FISCHER VIBRATOR LOCK-NUT.

Mechanical Fuel Feed Device.

No. 762,965.—L. F. Washburne, of San Francisco.

A fuel pump actuated by the explosion pressure, and intended to distinguish auto-

works very well. The radius of the weight 34 may be adjusted by raising or lowering it on rod 32. The left end of pipe 2 opens into the air, and on the suction stroke a little air is drawn in through check valve 31 to cool the plunger.



PORTER BATTERY PLATE.

matically between two weak explosions, one being weak from a lack of fuel and the other from an excess. In the drawings, 1 is the pump barrel and 2 the pipe connecting

Metal Wheel.

No. 763,145.—J. A. Brennan, of West Orange, N. J.

A disk-wheel comprising two pressed steel disks as shown with a cast or forged nut. The edges of the disks are flared outwardly at 23 and are then bent in again upon themselves and held by rivets 25 to form a smooth set for the tire. The frame thus formed is supported by bosses 29 pressed at intervals around the rim.

Storage Battery.

No. 763,321.—H. C. Porter, of Waukegan, Ill.

A battery having special devices for retaining the active material on the grids, and for catching the same in case of its

detachment from the grids in such manner that it will not short circuit the plates at the bottom of the cell. The inventor states that with the ordinary insulating supporting blocks under the grids, the latter object is not fully attained, as the material detached is slimy and adhesive, so that it clings to the blocks and eventually forms an electric bridge between the plates. To aid in retaining the active material the plate is surrounded by a casing *c*, of sheet lead, which is perforated with numerous small

the end of which, striking the cone 27, they are again deflected backward into the cone by the plate 23 whose center is cut out at 24. Thus the muffler acts by deflecting the gases back upon themselves instead of by numerous baffle plates.

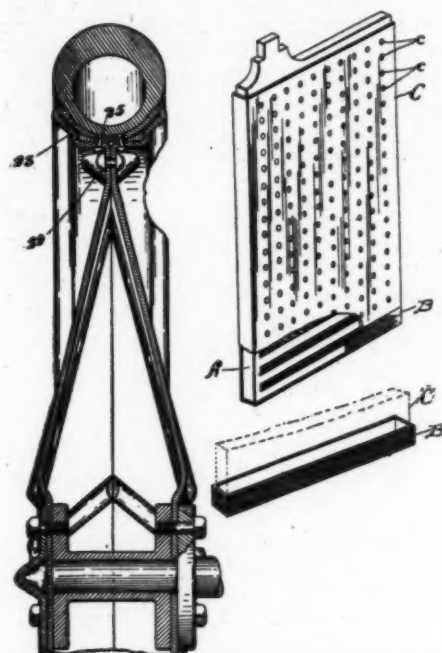
Frame Construction.

No. 761,690.—A. A. & L. H. Martell, of Elwood City, Pa.

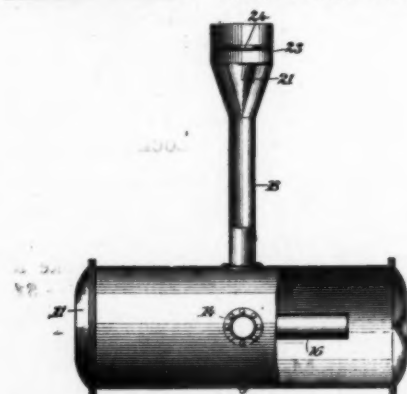
A pressed steel frame intended chiefly for heavy trucks. The axles are guided by

bolts 16. These wedges are backed by castings 7 riveted to ears 3. Fig. 3 is a section on line III III.

THE LOCAL MANUFACTURE and use of automobiles are discussed by United States Consul Fleming, of Edinburgh, Scotland, in a report published in the *Consular Bulletins*. From this it appears that Scotland is slow to fall into line on the automobile question, and the early automobilists in that country had a pretty hard time of it. The



BRENNAN WHEEL. PORTER BATTER GRID.



ULLOM MUFFLER.

holes *c*, the edges of the holes being turned inward into the active material. At the bottom of the plate is a pocket *B* of hard rubber or the like, which catches any detached active material. The customary insulating blocks are preferably retained.

Muffler.

No. 763,221.—I. B. Ullom, of Claysville, Pa.

The exhaust gases enter by the pipe 14 which has a tee branch inside the muffler, one arm 16 being seen. The gases issuing from 16 are deflected back by the dished ends 11 and pass out through pipe 18, at

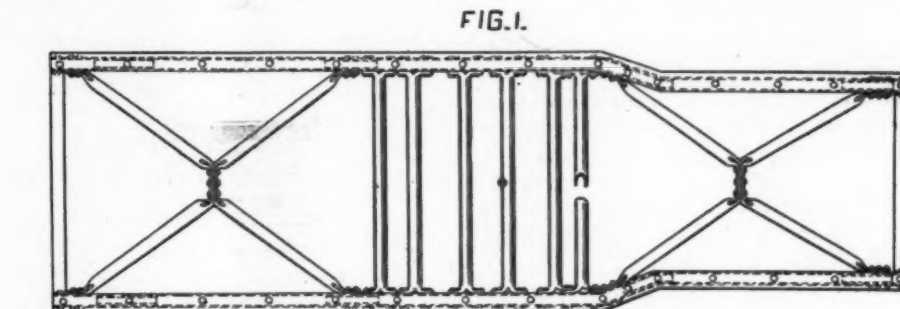


FIG. 1.

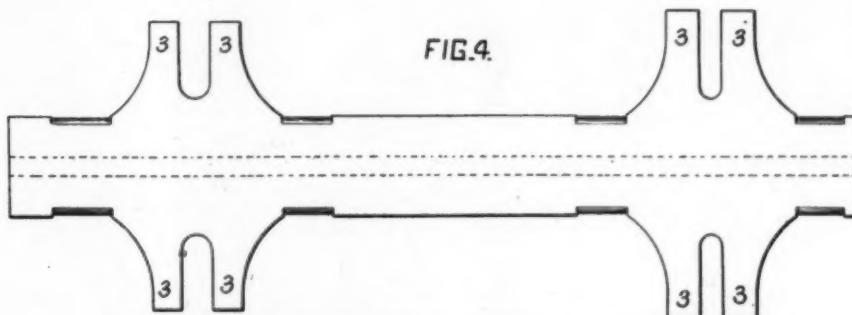
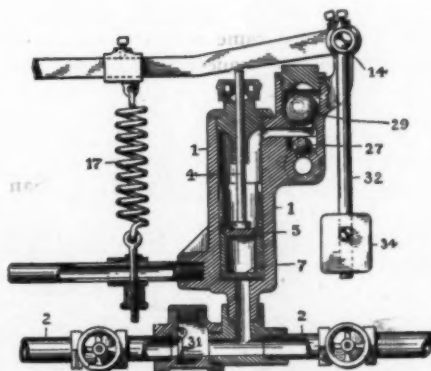
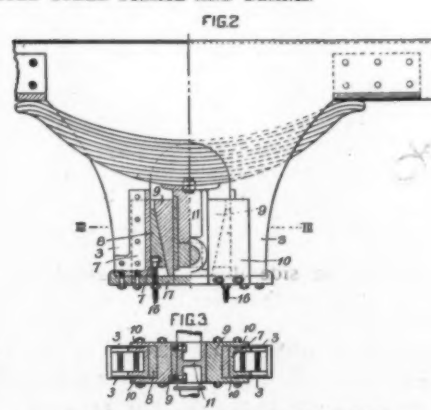


FIG. 4.

PLAN VIEW OF MARTELL PRESSED STEEL FRAME AND BLANK.



WASHBURNE FUEL FEED DEVICE.



DETAILS OF MARTELL PEDESTAL.

pedestals, both ends of all the springs being free, and the pedestals are formed integral with the side members. The latter have the form of an inverted U, and the pedestals are formed of ears 3 3. Figs. 1 and 4 show respectively a plan view of the frame and the blank from which the side members are pressed. Figs. 2 and 3 show details of the pedestal, spring seat and axle bearing. As seen, the spring seat 11 is an H-section casting, with the axle bearing in its base. It moves freely vertically between wedge guides 9, having ears 10, which keep them in place. Wear is taken up by adjusting wedges 8 by the

pioneers apparently had not much regard for the rights of other users of the road, or not as much as they should have had, and, being mostly tourists, generally managed to take themselves off immediately after any little unpleasantness, leaving the residents to vent their wrath upon automobilists to come. This practice has been followed regularly up to quite recently, when Parliamentary speed and other regulations somewhat cooled the anger of the wronged, and protected the unoffending motorists from being visited with the sins of their predecessors on the road. The speed allowed is 20 miles in the country and 12 miles in the city.



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(monthly) and the Motor Review (weekly).Copies Printed This Issue, - - 12,000
" " Since Jan. 1, - 349,300**Climb
to the
Clouds.**

The poetic and the practical were very happily mingled in the "Climb to the Clouds" contest in the White Mountains last Monday and Tuesday. Never before has an automobile contest been held in this country, and probably not abroad, amid such majestic surroundings as the two days' hill climb on Mount Washington. The setting was a subject for a great artist, and worthy to go down to coming generations in imperishable oils rather than ephemeral words.

Starting from a little sheltered leafy glen in the deep folds of the range, the narrow road leads through the woods, at the base up the pine-clad slope till the timber line is crossed. Here the storm-worn rocks shelter little alpine flowers that prettily color the barren ground. At each turn, and they are many, a noble view unfolds, and as one ascends the white drifting clouds pass silently by in dissolving view effects.

On the practical side the course is a demonstration ground that could hardly be excelled. From start to finish a steady drive is needed. There is no chance for jockeying, and the contestant knows that, watch in hand, the group on top is waiting. Nothing will help but progress—onward, upward. Motor and transmission and car must perform their several functions to the limit of endurance every foot of the way. It is a supreme test of man and machine.

Many manufacturers who did not enter cars will regret their decision. The honor

of record making in this climb is not empty, but will be surely measurable in dollars and cents when the purchasing public learns the facts.

There is no reason why the Mount Washington climb should not become a great international event. The place is easy of access, the course ideal, and the hotel accommodations are adequate in quantity and splendid in quality. With energetic management it is a combination that will win.

**Glidden
Endurance
Cup.**

Charles J. Glidden, the well-known Bostonian who has made several long-distance automobile tours in Europe during the past three years, has expressed his intention of offering an international cup for long-distance touring in this country. Although no details have yet been fixed on, it is understood to be Mr. Glidden's wish to make the contests distinctly of a touring character, in which reliability and not speed will win the prize. So far as possible, the private owner will be encouraged to enter, and it is hoped that this trophy will bear the same relation to touring contests that the Gordon Bennett cup does to speed contests.

Such a competition as the above is peculiarly suited to this country, where public sentiment is strongly opposed to extreme speed. With pure speed eliminated as a factor, the amateur will find it much easier to compete than when a special car must be built at enormous cost for that particular event; and the results, if the speed limit is not below that of ordinary touring, may be more valuable. Mr. Glidden deserves warm praise for his sportsmanlike and patriotic offer, the details of which will be awaited with great interest.

**Failure
to Amalgamate.**

It must be confessed that the explanations, as published on another page, of the collapse of negotiations for the merger of the American Automobile Association and the American Motor League fall considerably short of being either complete or satisfactory. If we suppose, as has generally been assumed, that the American Motor League is at all strong enough to be a desirable partner, and if it is liable to be working at cross-purposes with the A. A. A. unless merged with the latter, the members of both organizations are entitled to a better reason for the failure to come to terms than is contained in the admirably non-committal statement of President Whipple. "There will be no merger because we can't agree." "But what were your differences, and were they really insuperable?" "Our word for it, they were. Trust us." Such in effect, if not in language, is the attitude of the A. A. A. Board of Directors. There is a humorous side, however, to this pose of Olympian impeccability, and one can at least imagine some things that would justify it, as well as some others which would not. It is at

least satisfactory to learn that the seemingly impossible original demand of the A. A. A., that only club members should be represented, was modified by giving the club a definition elastic enough to fit the smallest village.

On the other hand, President Potter's statements deal overmuch with the, after all, rather technical question of the instructions of the committee on constitution and by-laws, and leave the impression that if the A. A. A. officials were willing to put themselves apparently in the wrong by disregarding the letter of the plan of merger, there must have been some strong reason for it. The two most tangible hints as to the nature of this reason—that the A. M. L. committee wanted a plan of representation which would open the way to wire pulling and personal politics, and that the strength and standing of the League had been found to be overrated—are not satisfactorily covered in President Potter's statements.

The most plausible explanation of the deadlock is to suppose that some reason, unsuspected when the plan of merger was framed, arose to make amalgamation seem disadvantageous to the A. A. A. On the facts as known, either of the possible reasons just noted might have existed, and it would not be strange if both were true.

**Coachmen
as
Chauffeurs.**

It is a common observation among private owners who have discarded horses for automobiles that their coachmen can readily be taught the ordinary care of the latter, and that as drivers they are much more efficient and satisfactory than the chauffeur who has graduated from the factory or repair shop. Although at first blush this seems rather contrary to the natural order of things, and doubtless was so a few years ago, it is to-day perfectly logical. The total management of the car comprises the three separate heads of driving, ordinary care, and repair. The first named covers the ordinary road manipulation as to turns, hills, rules of the road, etc., and is very quickly absorbed by a horse driver of fair intelligence, because it is so closely related to his past experience. The second calls for a moderate amount of mechanical knowledge, and the third may call for a good deal.

The third item is, of course, the factory-made chauffeur's strong card; but the importance of this item is becoming less rather than more, as construction is each year improved and difficult repairs are less frequent. Against this is the fact that the ailment known as the "big head" is alarmingly epidemic among this class of drivers, and their willingness to drive with decent regard to other road users is correspondingly small. This, of course, reacts on the condition of the car, which loses by rough usage what it gains in expertness of subsequent repairs. As the demand for chauffeurs is greater than the supply, many men

calling themselves such have the arrogance of the class without the mechanical skill, and by their recklessness and extravagance make themselves simple nuisances.

The coachman, on the other hand, rates his really valuable driving experience below its true worth, and, confessing ignorance of mechanical things, is anxious to learn. He must, of course, have the mechanical instinct, but this is often latent when least suspected; and in addition his previous training has tended to make him steady and industrious, and has given him none of the conceit of the man who thinks he had a "cinch" on his "job." He is far more likely to be merciful to his car, and when he can have the right sort of instruction, the result is very apt to be most gratifying.



Harry S. Harkness, the millionaire law-breaker, is much disgusted because other people besides himself insist on talking about his late unedifying exploit in driving from Boston to New York at an average speed of 45 miles an hour,—and talking, too, in a tone by no means in keeping with his own. He says, what everybody knows, that the run was made early Sunday morning, when there were only a few people in the way of being run over, and he thinks that should excuse him. Some one should tell him that the laws are made to be obeyed early Sunday morning as well as at other times. That is a poor excuse to pacify a New England village.



The projected Iroquois Memorial Hospital, Chicago, is to have, not an automobile ambulance, but an automobile emergency hospital, if the hopes of its directors are not disappointed. It is planned to have about the biggest affair that can be put on wheels, with nurses and surgeons at hand, to answer a hurry call on the shortest notice. It is a large order, but there are builders who could fill it.



Farmer antagonists of the automobile in Wisconsin are reported to have dumped loads of gravel in the road to impede the progress of the members of the Chicago Automobile Club who participated in the recent club run to Waukesha and Cconomowoc. Tourists through the Illinois "bot-toms" would welcome such methods on the part of the agricultural population.



A Denver barber had his ear nearly torn off by collision with an automobile driven by a local doctor, who postponed a trip to Europe to perform a skin grafting operation upon his victim. This is a sort of automobile graft that few would care to share in.



Moonlight runs have become popular with automobile clubs in widely separated parts of the country.

CALIFORNIA ENDURANCE RUN.

Rules Provide Pleasant Touring Conditions So That Women May Compete.

Special Correspondence.

SAN FRANCISCO, July 2.—H. C. Brown, chairman of the racing committee of the Automobile Club of Southern California, was in San Francisco recently, and after discussing with Chairman L. P. Lowe, of the racing committee of the A. C. of California, the conditions for the proposed endurance contest between San Francisco and Los Angeles, came to an agreement with him. The date has not been settled because several high-powered cars ordered by San Francisco dealers and private owners have not yet arrived. The cars should, however, be in this city in the course of two or three weeks. In that case, the endurance run will be held in July. If the cars (as is highly probable) do not arrive in time for a July event, the run will be postponed until after the annual meet of the Automobile Club of California at Del Monte.

The managers intend to make stringent rules against speeding and to inflict severe penalties for their infringement. The maximum speed to be permitted is a mile in four minutes, or fifteen miles an hour. The route has been laid out in such a way that cars starting at 8 A. M. can reach controls as early as 3 P. M., or up to 8 P. M. A car that reaches a control before the time fixed will be disqualified.

On the run from San Francisco to Los Angeles the first control will be at Salinas, in Monterey County; the second at San Luis Obispo; the third at Santa Barbara, and the fourth at Los Angeles—all in the counties of the same names. The longest day's run will be about 140 miles. The start from controls will be made at 7 A. M. on one morning and at 8 A. M. on other mornings. All the cars can reach the controls without difficulty before dark; and it is probable that most of the party will complete the run by 4 P. M. each day.

It is calculated that, with the limitation of speed to fifteen miles an hour, the run from San Francisco to Los Angeles and back will occupy 3,600 minutes. Each car will start with a credit of 3,600 points, one point being deducted for each minute of each penalized stop. The car that has the greatest number of points on the completion of the run will be pronounced the winner.

In order to encourage the travelers to take photographs along the route, stops made for this purpose will not be penalized. Delay caused by difficulties with tires will not be penalized, it being thought that punctures and other mishaps to tires are a matter of luck, and that penalties for stops on this account are unfair.

A stop of half an hour at noon, one of a quarter of an hour in the forenoon and one of the same length in the afternoon will be allowed without penalty, with the idea of rendering the run more pleasant and to prevent it from becoming irksome, especially to any women who may make the journey. The conditions have been made such as to allow women to drive their own cars and to encourage them to take part in the event. Stops due to blocked railroad crossings will not be subject to penalty. Gasoline or water may not be taken on during the morning or afternoon stops, but are to be taken on at noon or at the controls reached at the end of each day's run.

The committees in charge of the run will appoint an observer on each car, observers to be selected, as far as possible, from men on the staffs of the daily newspapers. The

nature of every stop will be determined from the reports of the observers. Judges will travel from control to control by railroad, and upon their reports and those of the observers the winners will be determined.

The run of the Automobile Club of California will be from San Francisco to Los Angeles and return. The cars of the Automobile Club of Southern California will join the San Francisco machines at Los Angeles, and accompany them to San Francisco. The southerners' contest will be completed on their return to Los Angeles. The northern automobilists will spend an entire day at Los Angeles and will be entertained there by the members of the Automobile Club of Southern California. The southerners will spend a day in San Francisco as the guests of the Automobile Club of California.

Cars entering the endurance contest are to be touring cars carrying at least two passengers apiece and an equivalent of four passengers weighing 165 pounds each, or 660 pounds in all. A car that does not carry a complement of passengers must make up the required weight, without reckoning gasoline, water or other supplies. Cars will be divided into one-cylinder, two-cylinder, three-cylinder and four-cylinder classes. There will be prizes in each class and also a prize in the open class. Prizes will be given by each club individually and by the two clubs jointly; also prizes awarded according to the consumption of gasoline.

The entrance fee for each car is \$50, \$40 to be repaid if the car actually starts in the run. It is hoped that all the entries made will be in good faith, and with this idea the rebate has been fixed. The \$10 retained will be used in defraying the expenses of the judges, who are to be sent on to the controls by railroad.

PROGRAM OF NEWPORT BEACH RACES

Special Correspondence.

NEWPORT, July 13.—Reginald V. Vanderbilt, of the committee in charge of arrangements, has announced the programme for the automobile race meet to be held here under the auspices of the Newport Amusement Association on July 30. Silver prize cups have been offered by Mr. Vanderbilt, his brother Alfred G. Vanderbilt, and Clarence W. Dolan. The association will also offer several handsome bowls and cups. The races will take place on Sachsest Beach, beginning at 3 o'clock in the afternoon. At low tide there is a course sixty feet wide and about two miles long.

The programme as arranged by Mr. Vanderbilt is as follows:

Motorcycles, open to all; silver cup valued at \$75.

Electric machines, open to locals; silver cup valued at \$100.

Gasoline cars, not exceeding 10-horsepower, raced in road condition, open to locals; silver cup valued at \$100.

Gasoline cars, exceeding 10-horsepower and not exceeding 24-horsepower, open to locals; silver cup valued at \$100.

Gasoline cars, not exceeding 24-horsepower, open to all; silver cup valued at \$100.

Gasoline cars, exceeding 24-horsepower; open to all; silver cup valued at \$100.

Each of the races will be over a distance of one and one-half miles. The term "locals" refers to permanent and summer residents of Newport, Narragansett Pier and Jamestown.

An automobile passed through our town Sunday morning at a very early hour, but very few were up in time to see the most "wonderful of all wonders."—*Sigourney (La.) News.*

MOTORCYCLE WEEK ENDED.

First Annual Meeting of Federation Concluded with Races and Election.

Contestants in the first annual meet of the Federation of American Motorcyclists left New York City on Wednesday July 6, at 5.30 A.M., for Cambridge, Md., where the track events and road races were to be held. The road for the first 150 miles of the 271 miles was excellent, contrasting most agreeably with the condition of the route traversed in the endurance contest between New York and Albany. From New York to Wilmington, Del., there was nothing to trouble the travelers but punctures, which were rather numerous, A. J. Banta, of New York, suffering no less than nine times from tire troubles. This run was another reliability contest, and the points made and lost were entered up to the riders as part of their records in the week's motorcycle trials of the Federation.

Sixteen men started from New York, as follows:

Rider.	Home.	H.P.	Machine.
James White, Newark, N. J.	134	Light	
Walter Zeigler, Hartford	214	Columbia	
G. M. Hendee, Springfield	134	Indian	
N. P. Bernard, Hartford	214	Columbia	
E. N. Coates, New Britain	214	Columbia	
Fred. C. Hoyt, Springfield	134	Indian	
A. J. Banta, New York	134	Indian	
F. A. Baker, Brooklyn	134	Indian	
G. N. Holden, Springfield	134	Indian	
Oscar Hedstrom, Springfield	134	Indian	
W. H. Latham, B'kline, Mass.	2	Yale-Cal.	
H. A. Gliesman, New York	134	Rambler	
J. M. O'Malley, Hartford	214	Tribune	
G. H. Curtiss, Hammondsport, N. Y.	212	Hercules	
B. F. McDaniels, Wilm'ton, Del.			
S. J. Chubbuch, Toledo, O.	2	Yale-Cal.	

Of the above, fourteen reached Wilmington, Chubbuch and McDaniels failing to make the control.

HARD DAY'S RUN THROUGH SAND.

The run from Wilmington to Cambridge was the last stage of the endurance con-

terrific downpour of rain. After wallowing around in sand and water for two hours, they took the train, utterly exhausted, to Cambridge.

Very remarkable was the ride of M. E. Toepel, president of the New York Motorcycle Club. Toepel has but one arm, yet he arrived safely at Cambridge. He went through with R. H. Nickerson as a companion, sustaining many falls, but no injury, and breaking only one pedal. Another tourist to make the trip was Dr. S. D. Bashore, of Palmyra, Pa. These three riders were all mounted on Indians.

TRACK RACES AT CAMBRIDGE.

The straightaway road speed trials had to be abandoned on account of the very poor condition of the road. This was a great disappointment to many of the riders as well as to the spectators, but excellent sport was enjoyed at the track. The track events resulted as follows:

Two-mile novice:—1, P. M. Smoot, Washington (134 Reading Standard); 2, J. McNevin, N. Y. M. C. Club (134 Rambler); 3, H. H. Wright, Cambridge, Md. (134 Indian). Time, 3:10 4-5.

Five-mile handicap:—1, J. McNevin; 2, P. M. Smoot; 3, H. A. Rhine, Washington (134 Reading Standard). Time, 7:38 2-5.

Quarter-mile slow race:—Geo. N. Holden, Springfield, Mass. (134 Indian). Time 2:44. Eight started, but all save Holden were disqualified for pedalling, "racing" of engines or stoppage of motors.

Five-mile team race:—Washington (Smoot and Rhine), 62 points; 2, New York Motorcycle Club (McNevin and Horenburger), 57 points. Time, 8:34. McNevin finished first on every lap, but Horenburger ran off the track and spoiled an easy victory for New York.

Three-mile handicap for F. A. M. members:—1, J. McNevin; 2, H. E. Walls, Cambridge, Md. (134 Reading Standard); 3, J. M. O'Malley, Hartford, Conn. (214 Columbia). Time, 4:38 4-5.

Five-mile pursuit race:—1, Robt. L. French, Baltimore (134 Indian); 2, H. A. Rhine; 3, J. M. O'Malley. Time, 8:08 3-5.

ONE PINT FUEL ECONOMY TEST.

Rider.	Machine.	Miles.	Yards.
F. A. Baker, Brooklyn	134 Indian	31 1/2	520
G. B. Gibson, Westboro, Mass.	134 Indian	28 3/4	
W. H. Latham, Boston, Mass.	2 Yale	22 1/2	520
S. Chubbuch, Toledo, O.	2 Yale	21	125
P. M. Smoot, Washington, D. C.	134 Reading Standard	17 1/2	245
J. F. McLaughlin, New York	214 Columbia	15 1/2	137 1/2
H. A. Rhine, Washington, D. C.	134 Reading Standard	15	358
G. N. Holden, Springfield, Mass.	134 Indian	11 1/2	782

One-mile for track record:—Fred C. Hoyt, Springfield, Mass. Time, 1:31 2-5.

J. McNevin (Rambler), H. A. Gliesman, N. Y., (Rambler), and Jas. Mayo, Pottstown, Pa. (214 h.p. Mayo), were disqualified for pedaling more than one hundred yards.

The figures in the one-pint fuel economy test excel the marks set in the one-quart economy test held in New York during the first part of the contest; but the Cambridge event was held on a level track under the most favorable conditions, there being no grade and no wind.

The diamond medal to be awarded to the contestant making the best showing throughout the week will, it is expected, be taken by either Holden or Hoyt; but the official figures will have to be compiled before it will be known which of the two scored the highest.

FEDERATION TO CONTROL RACING.

At the business meeting of the F. A. M., held at Cambridge, it was determined to

take over the control of motorcycle racing, which is at present in the hands of the National Cycling Association. This change will take effect on January 1 next. Another important move was the sustaining of the action of the executive committee in limiting the weight of motorcycles competing in open races to 110 pounds. Notwithstanding the criticism that has been called forth by this action, it is considered the wisest course to pursue, as it will encourage the construction of all-round serviceable machines and discourage the use of abnormally powerful track racers of no practical use on the road. It was considered that the manner in which the light machines acquitted themselves in the endurance run showed conclusively that they had ample strength for their work—notably, Hendee, who weighs 243 pounds, went through on a 110-pound machine.

Steps were taken toward the adoption of an official club emblem, and also of a suitable uniform of some sort of fabric, leather having been declared unsuitable.

The election of officers resulted as follows: President, R. G. Betts, New York; vice-presidents—Eastern district, Herbert L. Marsh, Hackensack, N. J.; Southern district, H. A. French, Baltimore, Md.; Pacific district, L. H. Bill, San Francisco, Cal.; secretary, Henry J. Wehman, Brooklyn; and treasurer, Dr. G. B. Gibson, Westboro, Mass.

ROAD INSPECTION TOUR.

Legislative Committee Making Trip Under A. R. Shattuck's Guidance.

A tour in the interests of good roads was commenced on Monday, July 11, when Albert R. Shattuck, chairman of the Good Roads Committee of the Automobile Club of America, started out in his car for Trenton, N. J., the first objective point, at the head of a cavalcade of automobiles in which were the following members of the State Legislative Committee appointed to investigate road matters: Senator J. P. Allds, of Norwich; Senator W. W. Armstrong, of Rochester; Senator F. C. Stevenson, of Attica; Senator G. R. Malby, of Ogdensburg, and Senator Edwin Bailey, of Patchogue, accompanied by W. Pierpont White, of the Interstate Road Commission; Henry A. Van Alstine, State Engineer; Charles Hotelling, sergeant-at-arms, and S. A. Church, court stenographer.

George F. Chamberlain and Robert L. Morrell furnished and drove cars for the party. Five automobiles in all were used. Trenton was reached after a leisurely run, several hours having been devoted to the examination of roads and some delay caused by a rainstorm.

The party was banqueted Tuesday evening at Trenton by New Jersey Road Commissioner Henry I. Budd and Frank Eppelle, Road Engineer of Mercer County. Road matters were freely discussed after the dinner.

The road mapped out for Tuesday's run included a ride over the roads of northern New Jersey, through Orange County, N. Y., and Newburg. New England will be visited later, and Boston will probably be the most distant point reached on the tour.

From August 16 to 22 General McArthur, of the Pacific Coast Division, U. S. A., will be in camp near Santa Barbara with nearly 1,000 regular infantrymen to go through war maneuvers. The General will use a touring automobile in the maneuvers to test its merits as a desirable adjunct for government use.

test, and will never be forgotten by the contestants. Throughout this section the roads were found to be simply paths through deep sand, with here and there a piece of hard but rough road. Falls were frequent and the breakage of handlebars and pedals appalling, although the softness of the sand saved machines and riders many a serious injury. On several occasions machines ran into deep sand-holes, where they stuck and remained upright, throwing their riders to the ground. Some of the contestants actually took to the fields. That Holden, Hedstrom and Hoyt managed to stick to schedule time, calling for a speed of fifteen miles an hour, is remarkable. They arrived at Cambridge on time, Hoyt first and the other two a minute later. Nine others came in later, all within the ten-mile-an-hour limit, in the following order: Banta, Hendee, Baker, Gliesman, O'Malley, Zeigler, Bernard, Coates and White. Curtiss and Latham were delayed by punctures and broken handlebars, and later were caught in a

MOTOR BOATS

MARBLEHEAD LAUNCH RACES.

Results of the Eastern Yacht Club's Auto Boat Events July 11 and 12.

Special Correspondence.

MARBLEHEAD, MASS., July 13.—A series of races for power boats was held off Marblehead, July 11, 12, and 13, by the Eastern Yacht Club, and some interesting contests occurred between boats ranging from the high-powered automobile boat to the small power dory. Six auto boats were present, as follows: *Mercedes III.*, H. L. Bowden; *Fiat I.*, Hollander & Tangeman; *Naughty Girl*, William Wallace; *Autowin*, E. S. Webster; *Sapho*, J. G. Hudson, and *It*, Howard Haskell. Not all of these appeared in any one race, and there were several breakdowns which prevented close finishes.

The course was triangular, $6\frac{1}{4}$ miles around, and was covered two or four times in each race. It was kept clear by torpedo

boats. *Fiat I.* and *Sapho* were started together. The former ran away from *Sapho*, doing the four rounds in 1h. 45m. 36s., or seven seconds less than the time spent by *Sapho* in making three rounds. In Class C *Autowin* started alone, and made the course in 2h. 7m. 4s.

The fastest time was that of the *Fiat I.*, whose average speed in the race on the second day was 14.2 miles.

OYSTER BAY LAUNCH RACES.

Vingt-et-Un II. and Queen, Win Best Elapsed and Corrected Time Prizes.

The Seawanhaka-Corinthian Yacht Club scheduled its first powerboat race for July 9, the courses being off Oyster Bay. The club offered prizes in each class and also a prize for the best elapsed time and one for the best corrected time. The day was clear and the water smooth. *Vingt-et-Un II.* made the run from New York to Oyster Bay, about thirty miles, in an hour and a half, at the same time the numerous fast launches about New York were conspicuous only by their absence.

The course was fifteen nautical miles, two

A statement furnished by the Automobile Club of America to Smith & Mabley and signed by J. Herbert Carpenter, chairman of the Motor Boat Committee, and by Secretary Butler, is in part as follows:

"As requested, we record the results of the trial as follows: Course—From the North Beach ferry dock to Throg's Neck Buoy, distance, $5\frac{1}{4}$ miles; four times over the course, a continuous run of 21 miles.

Net time.	
North Beach to Throg's Neck, $5\frac{1}{4}$ miles.	11:53
Throg's Neck to North Beach, $5\frac{1}{4}$ miles.	12:03
North Beach to Throg's Neck, $5\frac{1}{4}$ miles.	12:11
Throg's Neck to North Beach, $5\frac{1}{4}$ miles.	11:45

Total time for 21 statute miles... 47:54
or an average of 26.5 miles per hour. The time of the turns at each end of the course were deducted."

NEW YORK Y. C. RACES.

The New York Yacht Club has this year introduced a decided innovation in the form of a series of races for yachts so



AUTO BOATS STARTING IN THE RACES OF THE EASTERN Y. C. OFF MARBLEHEAD.—U. S. TORPEDO BOAT GUARDING COURSE.

boats detailed for the purpose. The auto-boat races were without time allowances, the elapsed time alone being taken into consideration.

FIRST DAY'S AUTO BOAT RESULTS.

On the first day *Mercedes III.* and *Fiat I.* both broke down in the first race, but the latter was repaired in time to participate on the second day, and *Mercedes III.* competed again on the third day.

The total times in the auto-boat classes for the first day were as follows:

Class C, 25 miles—*Autowin*, 2h. 22m. 56s. *Naughty Girl*, 2h. 28m. 17s.

Class B, 25 miles—*Mercedes III.* and *Fiat I.*, both disabled.

Special Race for the Gay Cup, 25 miles—*Autowin* 2h. 21m. 52s. *It*, 2h. 22m. 30s. *Naughty Girl*, 2h. 26m. 4s. *Sapho*, withdrew.

SECOND DAY'S RESULTS.

On the second day the fog which had proved something of a hindrance the day before lifted, and practically the whole course was visible from the starting point. There was a large attendance, more than two hundred yachts and launches being present among the spectators. The weather conditions were perfect.

In the first race for Class B automobile

boats of a triangle. *Vingt-et-Un*, steered by Mr. Hamilton, was alone in Class R, while the cabin launch *Queen Bess* was alone in her class. Class H. included the two G. E. & P. launches *Queen* and *Tide*.

The times were as follows:

CLASS R.					
(Start 12.35 P. M.)					
Boat and Owner.	Finish.	Elapsed Time.	Cor'ed Time.	Miles per Hour	
<i>Vingt-et-Un II.</i>					
Smith & Mabley.	1 23:05	0:48:05	0:48:05	21.90	
CLASS H.					
<i>Queen</i> , J. J. Amory.	1:44:16	1:09:16	0:44:36	14.96	
<i>Tide</i> , Colgate Hoyt.	2:08:00	1:33:00		11.16	

CLASS C.					
<i>Queen Bess</i> , R. H. Stearns	2:23:40	1:48:40	0:47:40	9.54	

The *Queen* received 24 minutes 40 seconds from *Vingt-et-Un II.*, which made her the winner on corrected time by 3 minutes 29 seconds.

"CHALLENGER'S" OFFICIAL TIMES.

The times made by Smith & Mabley's auto-boat *Challenger*, in her trials in Long Island Sound last week before she was shipped Saturday on the *Minnehaha* to compete in the Harmsworth cup race in The Solent on July 30, have been made public.

small that they are not entitled to enrollment in the club fleet. The first of three days' racing, on July 7, was for power boats, the course being off Glen Cove, in Hempstead Bay. Classes were provided for different sizes and types, but at the appointed time there were only two craft present, the new *Suis Moi* and the open launch *Javelin*. A heavy fog in the morning delayed the committee boat on her way up from the city; when she finally arrived at Glen Cove only the *Suis Moi* was to be found, so the races were abandoned.

As the automobile omnibus of the Hotel St. Francis, San Francisco, was going down Kearney street on the Fourth of July, carrying no passengers, a boy threw a lighted firecracker into it. The vehicle caught fire, but the chauffeur's attention was so much occupied in steering through the crowds on the street that he failed to observe the fire. A policeman and several people called to him without producing any effect. Smoke trailed out behind the car and soon flames appeared. A chemical engine went in pursuit of the burning automobile and the loud shouts of the crowd drew the chauffeur's attention. He stopped the motor car and the chemical engine stopped the fire. The automobile was damaged considerably.

DAYTON CLUB'S GOOD MEET.

Pleasant Gathering and Outdoor Dinner
Precede Interesting Track Events.

One of the most successful and generally pleasing automobile tournaments ever held in the Middle West was that of the Dayton, Ohio, Automobile Club on July 4. This was held at the Dayton Fair Grounds and was largely attended. There was a general gathering of motorists in the forenoon to enjoy themselves as they pleased, followed by a dinner in the shade of the forest oaks at noon. In the afternoon a most successful programme of track races was run off smoothly and without delays, special events being put on in place of several races that had to be omitted for lack of sufficient entries. Special attractions were Barney Oldfield in the Peerless racer, Carl Fisher, of Indianapolis, who drove the Premier Comet and his Mohawk racer, Earl Kiser in the Olds Pirate and J. J. Winchester, of Syracuse, in a Franklin. The best time made was a mile in 1:19.2-5, by Fisher in the Comet, who drove a two-mile exhibition in 2:40. A silver loving cup offered as a special prize for the car making the best time on Swinehart tires was won by Adolph Euchenhofer in a Stearns.

Following are the results:

Three miles, stock cars, stripped—J. D. Platt, Jr. (Franklin), first; C. C. Rooney (Marr), second; C. B. Wolf (Haynes-Apperson), third. Time, 5:03.

Special match race—J. J. Winchester (Franklin), first; Earl Kiser (Olds Pirate), second. No time given.

Five miles, open—J. J. Winchester (Franklin), first; Earl Kiser (Pope-Toledo), second; Barney Oldfield (Peerless), third; J. D. Pratt, Jr. (Franklin), fourth. Time, 7:27.1-5.

Special match race—Carl Fisher (Comet), first; J. J. Winchester (Franklin), second. No time given. Winchester's machine broke down.

Three miles, stock cars, stripped—A. M. Dodds (Franklin), first; H. M. Carr (Franklin), second; Harry Cappel (Cadillac), third. Time, 5:16.2-5.

Heavy touring cars, loaded, three miles—Carl Fisher (Pope-Toledo), first; Pierce Schenck (Winton), second; Barney Oldfield (Peerless), third; C. C. Rooney (White), fourth. Time, 5:43.2-5.

Stop and start, light touring, loaded, three miles—H. M. Carr (Franklin), first; Dodds (Franklin), second. Time, 7:15.

Special, two miles, against time—Carl Fisher (Comet). Time, 2:40.

Special, touring cars, three miles—Emil Koeb, first; C. B. Wolf, second; Adolph Euchenhofer, third. No time given.

Stop and start, three miles, heavy touring, loaded—Carl Fisher (Pope-Toledo), first; C. B. Wolf (Haynes-Apperson), second; Adolph Euchenhofer (Stearns), third. Time, 8:12.3-5.

Light touring cars, three miles—H. M. Carr (Franklin), first; A. M. Dodds (Franklin), second; J. J. Gardner, third. Time, 5:46.

Pursuit race, 5½ miles—Carl Fisher, first; J. D. Platt, second. Time, 7:32.

ATTRACTIONS AT EMPIRE CITY TRACK.

The Empire City track races for Saturday, July 16, should furnish excellent sport if the weather is favorable. Thirty cars have been entered, including the 60-horsepower Mercedes of Alfred Gwynne Vanderbilt, which will be driven by his chauffeur, Paul Sartori, and the Central Greyhound, an 8-cylinder racer which has never yet been given a thorough trial. The latter

machine will make an attack on the track record of 55 seconds, established by Barney Oldfield with the Winton Bullet. H. S. Harkness will send his 60-horsepower Mercedes against the track record. Nathaniel Huggins has entered with his 40-horsepower Decauville, and Joseph Cowan with his Panhard. The 90-horsepower Mercedes racer purchased from W. K. Vanderbilt, Jr., by J. M. Shanley, will probably be seen on the track, though it will not be sent after records. One of the chief events will be the Empire City Handicap, in which machines of all powers will be entered, from a light runabout to the 60-horsepower Fiat racer, which will be driven by Claude Fogelin.

CAUGHT IN KANSAS RAINS.

Rail Fences the Only Salvation of "Pathfinders" Seeking St. Louis.

Special Correspondence.

KANSAS CITY, July 9.—The "pathfinders" who left here Sunday morning to investigate the route for the St. Louis tour have met with many difficulties. E. P. Moriarty, who accompanied the party as far as Sedalia, Mo., the first night stop, left his car at Warrensburg and returned by train Wednesday morning, as mud made the roads almost impassable. He failed to go farther than Centre View, twenty-eight miles this side of Sedalia, on the first day, owing largely to tire trouble. He reports the roads very rough, but passable before the rains.

H. N. Strait, Henry Merrill, S. H. Merriam, Ralph Baker, W. G. Whitcomb and H. G. Blakley, in two White cars, pushed on to Sedalia after dark. Tuesday night they arrived in Boonville. Rain fell so heavily after Sedalia was passed that only twenty-eight miles were made in twelve hours. The tourists had to tear down rail fences and build roads in some places. The old Southern rail fence was their only salvation. A heavy rainstorm nearly swamped the party near Lees Summit, twenty miles from Kansas City. Both Mr. Strait and Mr. Merrill had tire trouble, and, after having used up the spare tires they carried, they wired to St. Louis for tires to be sent them along the road. The first of these were to reach them at Boonville.

Just before reaching Sedalia, the Merrill machine broke a front axle and had to be towed into town. Merrill is reported to have secured a new car, so that he could proceed. From reports received here, the trip is the hardest ever undertaken by Kansas City motorists.

ST. LOUIS TOUR ENTRIES.

The St. Louis tour entry list is beginning to assume goodly proportions as the time for starting approaches. About fifty entries had been received by the middle of the present week, of which the following is a partial list:

Boston to St. Louis—H. W. Whipple, Orange, N. J.; Elliott C. Lee, Boston; Charles J. Glidden, Boston; H. Frederick Lesh, Boston; Thomas B. Jeffrey, Kenosha, Wis.; Royal R. Sheldon, Boston; Dr. W. E. Rolfe, Boston; George H. Lowe, Boston; Cecil P. Wilson, Boston; A. P. Pendleton, St. Louis (may go from New York instead of Boston).

New York to St. Louis—C. H. Gillette, New York; W. T. White, Cleveland, O.; Augustus Post, New York; R. P. Scott, Baltimore (may go from Baltimore); James L. Breese, New York; A. J. Willis, Akron, O.; Haynes-Apperson Co., Kokomo, Ind.; Paul H. Deming, New York; Ray D. Lillibridge, New York; W. E. Metzger, Detroit, Mich.

Chicago to St. Louis—John Farson, Chicago; Frank X. Mudd, Chicago.

Providence to Albany—Dr. Julian A. Chase, Pawtucket, R. I.

Albany to Buffalo—Dr. W. E. Milbank, Albany.

Pittsburg to St. Louis—W. C. Temple, Pittsburg; R. H. Wallace, Freeport, Pa.

Columbus, O., to St. Louis—Wm. Monypenny, Jr., Columbus.

Syracuse to St. Louis—W. H. Smith, Syracuse.

Cleveland to St. Louis—Geo. S. Waite, Cleveland.

Baltimore to St. Louis—Hart D. Newman, New Orleans; Sam Stone, Jr., New Orleans.

Bristol, Conn., to St. Louis—F. N. Manross, Forestville, Conn.

Springfield, Mass., to St. Louis—Charles R. Greuter, Holyoke.

New York to Albany—A. R. Pardington, Brooklyn.

RESULTS OF PITTSBURG HILL-CLIMB.

The results of a hill-climbing contest held by the Pittsburg Automobile Club on Heberton Hill July 2, are given below. Thirty-five cars competed in eight classes, the events being run off in heats and finals. The course was about one-third of a mile long and the grade varied from 7 to 22 per cent., the steepest portion being paved with granite blocks. The first seven classes were for amateurs and in them all cars carried their full complement of passengers. Class 8 was a free-for-all for manufacturers and dealers. In the final of this event a record of 38 seconds for the course was made by A. C. Webb in a four-cylinder Pope-Toledo. In the heats Webb defeated W. F. Winchester (Franklin; time, 45.2-5 seconds), and O. E. Vestal (Richard-Brasier; time, 50 seconds), in 39.4-5 seconds.

Finals in three of the amateur events were won by H. C. Fownes.

Following are the times of the first and second men in the final of each class:

First Class—1 to 7½-Horsepower.		
Contestant.	Car.	Time.
John A. Pietsch...	Stevens-Duryea.	1:31
O. E. Vestal....	Crest.....	1:44.4-5
Second Class—8 to 10-Horsepower.		
W. W. Murray....	Franklin.....	1:01.4-5
S. J. Adams....	White.....	1:27.3-5
Third Class—11 to 14-Horsepower.		
W. S. Mellon....	Pope-Toledo....	1:25.4-5
Fourth Class—15 to 20-Horsepower.		
W. L. Dixon....	Peerless.....	1:45
D. M. Kirk....	Pierce.....	2:08
Fifth Class—21 to 24-Horsepower.		
H. C. Fownes....	Pope-Toledo....	52.2-5
F. F. F. Lovejoy....	Pierce.....	1:02.1-5
Sixth Class—Over 24-Horsepower.		
H. C. Fownes....	Pope-Toledo....	52
T. B. Riter....	Pope-Toledo....	54.1-5
Seventh Class—Free-for-all for Members of Pittsburg A. C.		
H. C. Fownes....	Pope-Toledo....	53.2-5
T. B. Riter....	Pope-Toledo....	1:00
Eighth Class—Free-for-all for Agents and Manufacturers.		
A. C. Webb....	Pope-Toledo....	38

A coil of wire, left hanging from a pole at Forty-seventh street and Troost avenue, caught the top of D. E. Gudgell's automobile while he was driving past that point last night. The top and the seat were almost jerked off, leaving Mr. Gudgell and his wife sitting on the flywheel of the engine. Neither was injured. The wire had been used in construction work by the Metropolitan Street Railway Company. It had not been securely fastened to the top of the pole and hung only about six feet from the ground.—Kansas City World.



HUSTLING MOTORCYCLE CLUB.

How the Philadelphia Organization Has Risen to Front Ranks in a Year.

Special Correspondence.

PHILADELPHIA, July 9.—Organized less than a year ago, the Philadelphia Motorcycle Club gives promise ere long of being one of the largest organizations of the kind in the country, not excepting the Metropolitan, and of ranking high in the councils of the Federation of American Motorcyclists, with which body many of the individual members are allied. A movement is on foot to have the organization join the F. A. M. as a club. The national body has already recognized the hustling abilities of this thriving young organization by appointing its secretary-treasurer, Charles Krauss, a member of the National Committee on Transportation and Facilities.

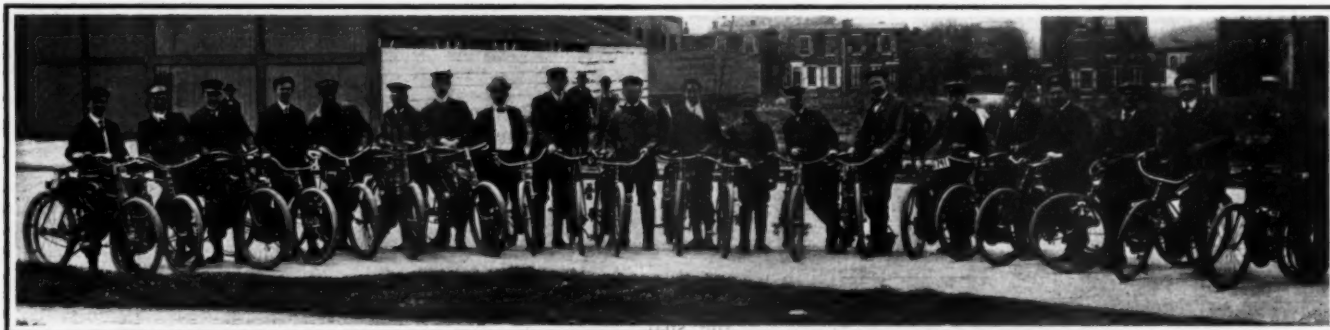
The membership of the Philadelphia Motorcycle Club has just about doubled in the eleven months of its existence, fifty-two names now being on the roll. The present officers are T. J. Kean, president; John O. Mohr, vice-president; Charles Krauss, sec-

is now fitting up a clubhouse on North Broad street near Venango, where all future meetings will be held and where facilities for the storage and repair of bicycles and motors have been installed.

A unique feature of the P. M. C. is its recruiting committee. This body keeps a record of all purchasers of motorcycles in the city, and within a reasonable time each new rider is invited and urged to join the club, an invitation being extended to him to take part in the next weekly run, when his experience is usually so delightful that he attaches his signature to an application blank within a short time.

The accompanying photograph shows a group of some of the members of the club just before starting on the Perkiomenville run. The attendance on that occasion was thirty-two, quite a number of the participants having already started before the photograph was taken.

The road officials of the club believe that motorcycling cannot become popular until each member thoroughly understands his motor and becomes sufficiently expert to repair and adjust the machine on the road. When necessary, the experts—and there are many in the club—coach the tyros, and the



MEMBERS OF THE PHILADELPHIA MOTORCYCLE CLUB READY FOR START OF CLUB RUN TO PERKIOMENVILLE.

retary-treasurer; Harry Schleter, captain; Frank Shaw, lieutenant, and Albert Warrington, color-bearer.

One of the principal objects of the organization is the popularization of the sport of motorcycling, through the medium of club runs, which are scheduled for every Sunday and holiday during the riding season. A number of these outings are called for points so far distant from the city and over such roundabout routes, that 100-mile runs are becoming rather numerous. The present season was opened on May 8, with a fifty-mile run about Philadelphia. Then followed runs to Essington, Egg Harbor, Valley Forge, Atlantic City, Perkiomenville, Quakertown, Wilmington, Mt. Holly and Spring House.

At each monthly meeting the runs of the following month are announced. One of the features of the present month will be a "blind run," for which the participants have been warned to make complete preparations in the way of fuel supplies. No one will be aware of the objective point but the captain, and as he is a mileage fiend it is quite likely that he will lead his men over hill and dale for 150 miles or more—the start will be sufficiently early in the morning to allow of that before dark. More than half the members have already signified their intention of participating.

An evidence of the progressiveness of the club is the fact that it recently leased and

good results of this are noticeable on each succeeding run. An object lesson—a relic illustrating an ingenious temporary repair—occupies a place of honor in the clubhouse. Far from home one day Secretary-Treasurer Krauss was so unfortunate as to break the exhaust valve of his motor. It looked like a fifteen-mile drag until Krauss' eye happened to notice that the top pieces of an ornamental iron fence surrounding a suburban residence he was passing were just about the shape and size of the valve. Dismounting, he hunted up his file and in a few minutes had secured one of the ornaments. A quarter hour's work with the file sufficed to fit the improvised valve to his motor, and he was enabled to reach home without further mishap. His clubmates thought so much of the feat that they voted money to have the ornament handsomely mounted and installed in a prominent place in the meeting room of the club house.

TORONTO CLUB HOUSE WARMING.

Special Correspondence.

TORONTO, Can., July 9.—The Toronto Automobile Club opened its new club rooms in the King Edward Hotel on the evening of July 4. The affair was made the occasion of a banquet and smoker, at which about fifty invited guests from Cleveland, Buffalo and Hamilton were present. It was the

greatest gathering of automobilists ever assembled in Toronto.

The Cleveland contingent arrived about 7 P. M. Monday, having left Cleveland at 8 A. M. Saturday. They made the distance from Cleveland to Erie, Pa., 102 miles, in six hours. One machine occupied by Archibald McLaren and Dr. McTaggart came to grief between Buffalo and Hamilton, and could not proceed.

The party was joined at Buffalo by thirty-four members of the Buffalo Automobile Club and their friends.

After enjoying the hospitalities of the Toronto Automobile Club, the American visitors left at 8 o'clock the following morning on their return journey.

NEWS NOTES OF THE CLUBS.

PITTSBURG.—The Automobile Club is taking steps to stop the practice of throwing stones and other missiles at carriages and automobiles in the city, and has offered a reward of \$50 for the apprehension of any one guilty of such an offense.

RIDGEVILLE, Ind.—The Randolph-Jay Automobile Club has been formed, with the following officers: J. O. Carpenter, president; J. A. Lay, secretary; H. H. Bragg, treasurer; F. R. Rohr, of Ridgeway; Frank White, of Portland, and Ed Koontz, of Union City, vice presidents.

DALLAS, Tex.—The Dallas Automobile Club has been formed, with the following

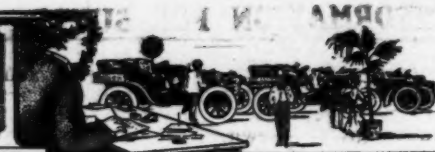
officers: John G. Hunter, president; E. J. Kiest, vice president; G. C. Scruggs, secretary, and J. D. Scofield, treasurer. Henry Garrett was elected manager and director, and Messrs. Leachman, Morgan and Dreeben were appointed a committee to draft by-laws. Nineteen charter members were enrolled.

HARTFORD.—The Hartford Automobile Club and the Automobile Club of Hartford have consolidated under the name of the latter organization, with the following officers: J. Howard Morse, president; Fred C. Billings, vice president; W. T. Plimpton, secretary, and A. W. Gilbert, treasurer. L. C. Grover is chairman of the membership committee; C. E. Walker, chairman runs and tours committee; L. D. Fisk, chairman racing committee; C. G. Huntington, chairman committee on rights and privileges, and Joseph Birmingham, chairman committee on good roads.

PHILADELPHIA.—October 1 has been set for the second annual run for the Cross-Country Challenge Cup of the Automobile Club of Philadelphia. Last year's run was to Phoenixville and return. This year the route will be longer and more difficult. The course will be in the shape of a rough square, the first leg being to Ambler, fifteen miles; the second, to Phoenixville, via Norristown, sixteen miles; the third, to West Chester, fifteen miles; and home.



NEWS AND TRADE MISCELLANY



A 1905 White car will this week be placed in the White exhibit in the Transportation Building at the World's Fair.

Thomas B. Jeffery & Co., makers of the Rambler automobiles, have recently opened a Chicago store at 302-304 Wabash avenue.

We are informed that the Olds Motor Works can now make immediate deliveries of Oldsmobile curved dash runabouts and light touring cars, having overtaken the orders for these vehicles.

E. J. Willis, 14 Park Place, New York, dealer in automobiles and supplies and accessories, has established a branch at 220 W. Thirty-sixth street.

John Wanamaker has opened a sub-agency for the Ford and Premier automobiles at 153 W. Thirty-eighth street, New York. This is subsidiary to the main agency at 140 E. Fifty-seventh street, and not a removal.

Justice Andrews has named John J. Brady as permanent receiver for the bankrupt Central City Automobile Co., of Syracuse, N. Y., and James S. Thorn, referee, before whom hearings will be had in the final winding up of the company's affairs.

The Moxie Company, of New York City, has recently received an Oldsmobile delivery wagon, making twelve of this make now in use in the service of this company. The wagon, which was delivered through the Boston agency, was sent over road via Providence.

It is reported that Colonel Albert A. Pope will next year begin the manufacture of a medium priced runabout in the Western Wheel Works factory in Chicago, which is to be refitted for this purpose. The plan, as outlined, is the manufacture of a gasoline machine that will retail at well below \$1,000. Announcement of this move is expected shortly from the Pope headquarters.

The Standard Roller Bearing Company, Philadelphia, Pa., has increased its capital stock from \$1,000,000 to \$2,000,000. A 250-foot addition to the machine shop and factory will be built and also a two-story office building, these to be devoted exclusively to the manufacture of roller bearings. The ball plant will also be increased by the erection of a large three-story addition.

A photographic contest has been started by Thomas B. Jeffrey & Co., Kenosha, Wis. The contest rules stipulate that each photograph submitted must show a 1904 Rambler car; pictures to be not less than 4 by 5 inches; two prints to be submitted, one carbon and the other gelatine; pictures to remain the property of the company. Competitors may enter as many pictures as they like. The prizes consist of automobile lamps and horns, the first prize being a Solar searchlight valued at \$50.

The New York agency for the Crest automobiles has been established at 144 W. Thirty-ninth street, under the control of the Star Rubber Co., where a complete line of Crest cars will be handled, from the 5 1-2-horsepower air-cooled runabout to the 20-horsepower water-cooled touring car, the list including a delivery wagon. E. D. Cadwell is president of the company and F. P. Johnson, secretary-treasurer. Frank G. Dwight, Jr., who was formerly identified with the Cadillac and Winton concerns at different periods, is also connected with the new agency.

All the St. Louis repositories are providing for the storage of large numbers of cars, and arranging conveniences for motorists during their stay in the World's Fair city.

John D. Rockefeller has placed his order with the Knox Automobile Company, Springfield, Mass., for a 16-horsepower double-cylinder surrey. The Knox company is especially pleased with this order because it is the first large gasoline car purchased by Mr. Rockefeller.

The Michigan Automobile Co., Ltd., makers of the Michigan light touring car, of Kalamazoo, Mich., shipped its first carload of machines to the East on July 9. It went to the Newark Automobile Co., Newark, N. J., distributors of this car for northern New Jersey.

Sanction has been granted by the racing board of the A. A. A. for an automobile race meet at Poughkeepsie on September 16, which will be held in connection with the sixty-third annual fair of the Dutchess County Agricultural Society. The track is a one-mile circuit, and eighty feet wide.

Cardinal Satolli, who has been visiting the World's Fair, has used an automobile extensively in going to and from the Jerusalem exhibit. While he was the guest of R. C. Kerens he was driven through the residence portion of St. Louis in the latter's handsome motor car. He likes the new form of locomotion, and commends its time-saving qualities.

The five-mile championship cup, given two years ago by the Diamond Rubber Co., of Akron, will be contested for again in the races to be held in Cleveland, O., in August. Alexander Winton won the cup in 1902, and F. A. La Roche won it in 1903 at the Empire City track. By the conditions under which the cup was given, it must be won three times by a manufacturer before it becomes his permanent property.

Mr. and Mrs. G. H. Thomas and Mr. and Mrs. A. S. Hitchcock, of Providence, R. I., completed an ideal automobile trip of about seven hundred miles in their Autocar the first week in July. Their trip was to New York City by way of Worcester, Springfield, Hartford, and New Haven, and after a rest in New York on to Long Branch and Asbury Park. The distance between Providence and New York of 152 miles was traveled in one day. A remarkably successful trip was enjoyed, as there were no troubles whatever with either the engine or tires—the hood not being lifted from the engine the entire distance.

The educational committee of the Detroit Y. M. C. A., at its last meeting, appointed a number of leading local automobile constructors as members of an advisory committee for its motor school, feeling that properly to care for the needs of the school it is necessary to have a committee of practical automobile and gas engine manufacturers with whom the instructors may counsel on questions that may arise. Professional talent has been engaged for the teaching faculty. Henry B. Joy, of the Packard Company, who has been appointed a member of the advisory committee, asserts that the work of the Detroit school has been productive of much good in that city and recommends its methods in connection with the Y. M. C. A.'s in other cities.

Twenty-five automobiles are now owned and operated in Butte, Mont.

Nearly every automobile in South Bend, La Porte, Elkhart and neighboring Indiana towns took part in a very successful Fourth of July parade held in the evening. The procession was headed by the city officials of South Bend and nearly every car carried some emblem of patriotism, while some were elaborately decorated with flowers. Three prizes were awarded for the most handsomely decorated gasoline, steam and electric vehicle.

Dr. Stewart and G. H. Hill, of Pittsburg, have made the run from the Smoky City to St. Louis over the proposed A. A. A. tour route. They used a Pope-Toledo car, and covered the distance of 1,000 miles in eight days, carrying 250 pounds of baggage. The motorists report the roads as better than they expected. They will return by automobile this week, making business stops at Toledo and Detroit.

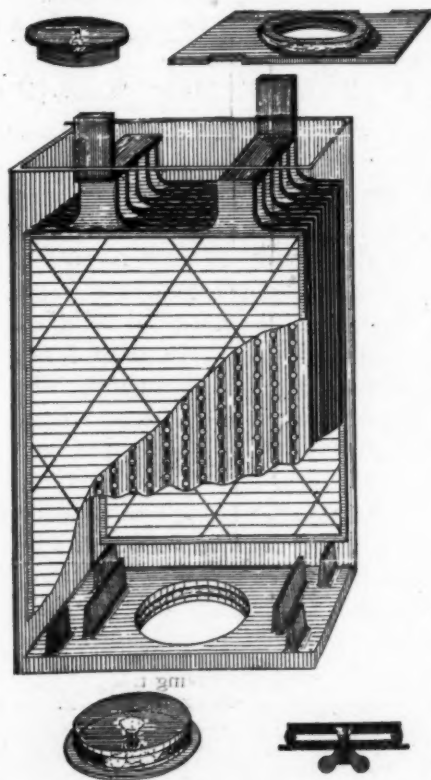
The California Promotion Committee of San Francisco is proposing to eastern capitalists the feasibility of establishing an automobile factory in San Francisco to supply the Pacific Coast market, and a number of them are inclined to think the project would prove profitable. A large automobile plant is almost certain to be established soon on the coast, where thousands of motor cars are already in use.

The New York garage of the White Sewing Machine Co., 42-44 West Sixty-second street, have been pursuing a novel procedure regarding orders for the 1905 White cars, since closing out all of the 1904 model. Before the announcement of the new model it was impossible to explain to prospective purchasers any details of the car. The regular deposit required is \$500, but until these in charge of the New York garage knew what they had to sell, they accepted deposits of \$250, giving the depositor the option of withdrawing the deposit, or putting up an additional \$250, when the details of the car were made known. More than thirty orders were placed on this condition.

James B. Dill, of East Orange, N. J., started on July 10 on an automobile tour of ambitious proportions. His former camping ground at the Rangeley Lakes, Maine, is the objective point, but instead of going there direct he will take a new and unmapped route through a portion of the Canadian province of Quebec, and if successful in finding a practicable route, will make a chart for the guidance of future tourists in that region. The party consists of Mr. Dill, his daughter, Miss Emma Dill, and John M. Schmidt, who accompanied him last summer on his White Mountain tour. An additional car was taken along loaded with baggage, tents, supplies and provisions, and a servant. The tourists were accompanied by Winthrop E. Scarritt, president of the Automobile Club of America, who, however, will not go all the way through. While traveling through the woods the rifles of the men will be expected to furnish fresh meat. As a complete camping outfit is carried, the party is almost entirely independent of settlements except for gasoline, which Mr. Dill has taken the precaution to ship ahead to points where he can call for it.

INFORMATION FOR BUYERS.

WASHABLE BATTERY CELL.—A new and apparently very promising idea in storage battery construction is shown in the illustration given herewith. One of the most serious troubles with lead storage batteries is the difficulty of cleaning them of the detached active material which drops to the bottom of the cell. The plates are supported on knife-edge blocks or other devices, in order to let this detached sediment drop as freely as possible clear of the plates, but it is seldom possible to prevent entirely the chance of short-circuiting. The only way of cleaning the cells heretofore has been by lifting out the grids, a process which is liable to injure them, as they are very delicate. In the cell illustrated there is a round block in the bottom of the cell, ingeniously arranged with a soft rubber gasket, which it made tight by screwing up



the wing-nut at the bottom of the plug. By removing this plug the acid may be drawn off into a pail held beneath the battery jar, which for this purpose is supported on a trestle, or the like. A hose may then be used to wash clean the interior of the cell, after which the acid may be filtered or settled and used again. This cell is known as the Duntley washable battery cell, and is made by the Chicago Storage Battery Company, 1241 State street, Chicago.

AUTOMOBILE LEATHER.—The manufacture of leather suitable for automobile upholstery is a specialty to which particular attention is given by the American Oak Leather Company, which has offices in Cincinnati, St. Louis, Chicago and Boston. Automobile leathers are made in various colors and grades to suit the requirements of manufacturers of automobiles. Representatives of the American Oak Leather Co. will be pleased to call on automobile builders to discuss their requirements in this direction. The company has a wide experience in the manufacture of carriage leathers, which it can furnish in any quantity at short notice.

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Advertisements inserted under this heading at 20 cents per line; about 7 words make a line. Remittance should accompany copy. Replies forwarded if postage is furnished.

CHAFFEUR and strictly first-class auto mechanic desires to correspond with party intending making run to St. Louis. Address 61, The Automobile. 16

FOR IMMEDIATE DELIVERY, new Packard Model "L" Vulture Legere; write at once Packard Motor Car Agency, Limited, 224 Wyoming Ave., Scranton, Pa. aug6

FOR SALE.—Gasoline Auto, good as new. Very cheap. Fisher, Bergen, N. Y. 16

FOR SALE.—Locomobile used less than one season, or will sell the engine. Boiler and tanks separate. Address Locomobile, Cadwallader, Penna. 16

FOR SALE.—1904 Latent Orient Buckboard, used about 50 miles; exactly as good as new; gas lamp and horn, for \$325, crated. Address A. C., care The Automobile. 16

FOR SALE.—Gasoline Runabout, A-1 condition, with top, 8 h. p. double opposed cylinders, extra tire. Geo. W. Brown, 60 Union St., Amsterdam, N. Y. 16

FOR SALE.—One Oldsmobile good as new; wood wheels; Dunlop detachable tires (new); Dietz brass lamps; a snap for \$350 cash. Charles A. Vuille, Huntingdon, Pa. 16

FOR SALE.—A very fine high-powered new touring car, completely equipped with 5 lamps, 3 hampers, etc., at a great bargain. G. J. Loomis, Hotel Baldwin, Hagerstown, Maryland. 16

FOR SALE at a bargain, 30 Apple Dynamos, new, for Automobiles, complete with governor, either with friction or belt drive. The R. M. Cornwell Co., 416-420 S. Salina St., Syracuse, N. Y. 16

FOR SALE.—Pope-Tribune runabout; in first-class order; only run 200 miles; it is a bargain at \$500; want larger car. Also one 3-wheel Knox; in fine running order; at \$250. J. C. Gallagher, Elmira, N. Y. 23

FOR SALE.—Kensington 12-hp. tonneau, almost new, cost \$2,500, for \$800; Electric Stanhope, new, \$1,800, for \$800; Electric Light Delivery, new, \$1,800, for \$900. The Knowles Automobile Mfg. Co., Buffalo, N. Y. 16

FOR SALE.—One 1903 Thomas model 18 tonneau touring car delivered new from factory this year; complete equipment; run about 500 miles; guaranteed perfect, for \$750. Address T. C., care The Automobile. 16

FOR SALE.—New Model D, 1904—White Steam Touring Car, with canopy top. C. C. Stoltz, Marion, O. 16

FOR SALE.—Auto Trucks, 1 to 3 ton capacity; Passenger cars 10 to 20 capacity. Electric and gasoline. Immediate delivery. Photos, description and prices to interested parties. Address Chas. E. Newland, Auto. Sta., East St. Louis, Ill. 16

FOR SALE.—American Electric Runabout, practically new, Exide batteries. Used very little. Beautifully finished, and very graceful in appearance. Will sell for \$450. Address Roy McDougal, 1049 Third Ave., Louisville, Ky. 16

FOR SALE.—White Steam Touring Car, 1903 Model, run about 500 miles. Splendid condition; side baskets, pair 8-inch Rushmore Search Lights, largest size special horn. \$1,250 F.O.B. Louisville. Ira S. Barnett, Third and Broadway, Louisville, Ky. 16

FOR SALE.—American Gasoline Runabout, 7 h.p., used not over 500 miles. Strong, handsome and in excellent condition. Fine lamps, horn, 30 x 3 Goodrich, Clincher tires, etc. Want to sell quick to get big car. Bargain at \$550, with extra surrey body included. H. Levy, 1051 Third Ave., Louisville, Ky. 16

FOR SALE CHEAP—One 2-cylinder U. S. Long Distance touring car. This is a special built machine and it is in fine condition. One Locomobile steamer. This machine can be bought cheap as the owner has bought a large touring car. Write for particulars. Robinson's Automobile Station, Worcester, Mass. 23

FOUR CYLINDER LOCOMOBILE, with aluminum body, baskets, tools, etc. Has been used only by us, for demonstrating purposes. Is in absolutely perfect condition; demonstration given gladly. A good chance to secure a standard 4-cylinder car at a reasonable figure. The Locomobile Company, 76th St. and Broadway, New York. 16

GASOLINE testing outfit, accurate, indispensable, vest-pocket size, complete, \$1 postpaid. C. A. Vuille, Huntingdon, Pa. 16

NEARLY new runabout for sale, with 8 h. p. 2 cylinder Brennan motor, wood wheels, long wheel base, wheel steer, lamps, horn, price, \$350. C. A. Ross, Little Falls, N. Y. 23

NOTICE to Rambler owners—I have increased the power of my 1903 Rambler until it carries four people 30 miles per hour and up all hills on high-gear. The device perfected by experiment is now ready for the market. Price, \$5.00, with instructions for attaching—no machine work required. Oliver F. Conklin, Springfield, O. 16

OLDSMOBILE with top and dos-a-dos seat, wire wheels and all late improvements, \$350; one locomotive in fine operating condition, \$190; one 1902 Toledo steamer, like new, complete with Rochester automatic offer. A bargain at \$250; three 1903 Franklins, new, \$1,000; one 1904 auto car, used but a very short time, two large acetylene lamps, horns, tools, etc., a number of extras, \$1,500; one 1904 Peerless, 4-cylinder, run less than 100 miles, dark Brewster green, out of factory less than two weeks, immediate delivery, \$3,300; one 1903 auto car, dark red finish, first-class operating condition with two large acetylene lamps, \$975. The R. M. Cornwell Co., 416 S. Salina St., Syracuse, N. Y. 16

ONE 1904 Knox Touring Car for sale, new from factory only, cost \$1,500; will sell for wholesale price; have larger car. Box N, Essex, Ct. 23

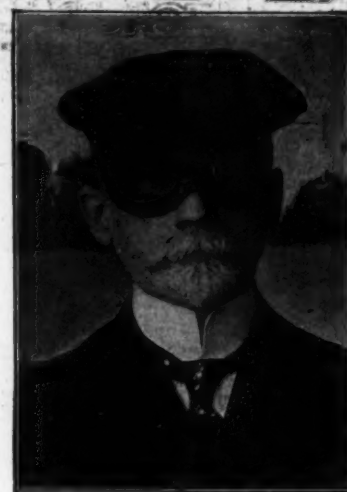
POPE-TOLEDO 18 H. P. 1903 touring car; seats five; splendid condition; bargain; owner has 24 H. P. car, same make. A. L. Skinner, 197 Shonnard Terrace, Yonkers, N. Y. 16

SEND five cents for our illustrated catalogue of second-hand automobiles. Big variety, low figures. Mississippi Valley Automobile Co., St. Louis, Mo. 16

TWO autos, complete, without power. Two Shelby cars, one never used, for less than half price. Also 5 and 10 H. P. engines. N. J. White, Marion, O. 16

TWO ROYAL TOURIST 16-18 H. P. cars. Have been used a short time for demonstrating. Will sell at a reasonable price. Car guaranteed same as a new one. The Royal Motor Car Co., Cleveland, O. 16

WANTED.—16 or 18 inch Locomobile boiler. State lowest cash price. Boiler, care The Automobile. 16



Goggles in Service.

Patented Cap WITH GOGGLES ATTACHED.

Perhaps this is the cleverest cap ever filed at the patent office. The goggles, which are very light, fold in the projecting crown of the cap. You are never conscious of their presence until they are needed, nor can you break or forget them. The flap to protect the ears and head fastens at the top with ball and socket snaps.

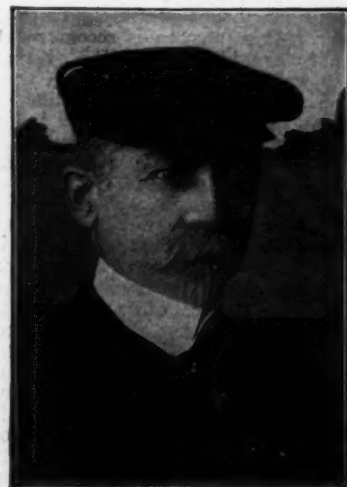
Of Covert in tan or brown, Linen in tan, Scotch Tweed in mixtures, Silk Rubber in tan, navy, brown or black, and Pongee Silk in tan, \$4.75.

Of Danish Kidskin leather, in black or tan, \$6.00.

Please send for our catalogue.

Saks & Company

Broadway, 33d to 34th Sts., New York



Goggles Folded in Crown.